

JOURNAL OF GENERAL CHEMISTRY OF THE U.S.S.R.

Index to Volume XXVI, 1956

Publication of the Academy of Sciences of the U.S.S.R.

---

IN ENGLISH TRANSLATION

Copyright, 1958

CONSULTANTS BUREAU

227 West 17th Street

New York 11, N. Y.

Printed in the United States

Subscription to 1956 issues and index \$175.00  
Index 5.00



January, 1956

## TABLE OF CONTENTS

	Page	Russ. page
1. Heterotriacids. V. Heterotriacids of Phosphorus and Silicon with Varying Composition of Addends, Containing Molybdenum and Tungsten. <u>A. I. Kokorin and N. A. Polotebnova</u> .....	1	1
2. Preparation of Silicotungstic Acid Without the Use of Ether. <u>E. A. Nikitina, G. N. Pyatnitskaya and I. I. Angelov</u> .....	9	10
3. Ammonium-Calcium Octoborate. <u>A. F. Ievinsh, Ya. K. Ozol and S. G. Vimba</u> ...	15	17
4. Irreversible Reciprocal Systems of the Singular Type with Layering from Chlorides and Nitrates of Potassium and Silver, and Bromides and Nitrates of Potassium and Silver. <u>G. M. Lifshits</u> .....	19	20
5. Dipole Moments of Some Complex Compounds of Indium and Thallium Trihalides. <u>I. A. Sheka</u> .....	25	26
6. Formation of Sulfides in the Reaction of Ferrous Sulfide with Metal Oxides. I. Reaction of FeS with $Al_2O_3$ in Presence of Carbon. <u>Zh. L. Vert and M. V. Kamentsev</u> .....	29	30
7. Study of Vanadyl Tartrate Complexes. <u>V. L. Zolotavin and N. I. Sintsov</u> .....	33	34
8. Investigation of Aqueous Solutions of Dibasic Organic Acids. <u>A. A. Glagoleva</u> ...	39	41
9. Synthesis of Triethylcarbinol and 3-Ethylpentene-2 from Ethylmagnesium Bromide and Carbon Dioxide. <u>A. L. Liberman, T. V. Lapshina and B. A. Kazansky</u> .....	43	46
10. Conjugated Systems. LIX. Condensation of $\gamma$ -Vinylpyridine with Diene Hydrocarbons. <u>A. A. Petrov and V. Lyudvig</u> .....	49	51
11. The Synthesis of Nerol and Geraniol. <u>G. I. Samokhvalov, M. A. Miropolskaya and N. A. Preobrazhensky</u> .....	53	54
12. Configuration and Properties of Unsaturated Acids and Their Derivatives. IV. Oxidation of Octadecenoic Acids and Their Esters by Benzoyl Hydroperoxide. <u>A. K. Plisov and N. S. Skornyakova</u> .....	57	59
13. Compounds Containing a Three-Membered Oxide Ring. XV. Study of the Reaction of the Ethyl Ester of $\beta$ -Methyl- $\beta$ -Propylglycidic Acid with Aniline. <u>V. F. Martynov and Ya. A. Kastorn</u> .....	61	63
14. Synthesis of Thiazole Derivatives with the Help of Organolithium Compounds. <u>B. M. Mikhailov and V. P. Bronovitskaya</u> .....	65	66
15. Reaction of the Ethyl Ester of Chloroindanedione-Carboxylic Acid with Primary Amines. <u>G. Ya. Vanag and R. Ya. Silaraya</u> .....	69	68
16. Mixed Esters of Arylsulfonimidophosphoric Acids and Non-Rotational Tetrahedral Isomerism. <u>A. V. Kirsanov and V. I. Shevchenko</u> .....	75	74
17. Acetylene Derivatives. 170. Heterocyclic Compounds. XXXI. Synthesis and Transformations of Heterocyclic Acetylenic $\gamma$ -Glycols. <u>I. N. Nazarov and L. N. Ivanova</u> .....	79	78

## TABLE OF CONTENTS (continued)

	Page	Russ. page
18. Molecular Chromatography. IV. Resolution of Mixtures of Nitroanilines. <u>K. A. Ogloblin and G. V. Markina</u> . . . . .	93	96
19. Nitration of Phenyltrifluoromethyl Sulphide. <u>L. M. Yagupolsky and M. S. Marenets</u> . . . . .	99	101
20. Structure and Color of p-Phenylazo-Substituted Anils of Glutaconic Dialdehyde. <u>N. E. Grigoryeva and R. M. Zueva</u> . . . . .	105	107
21. Action of Sulfur Chloride on $\beta$ -Aminoanthraquinone. <u>M. K. Bezzubets</u> . . . . .	109	111
22. The Reaction of Phenylmagnesium Bromide with Silicon Tetrafluoride. <u>G. V. Medoks and E. M. Soshestvenskaya</u> . . . . .	113	116
23. Cleavage of Diphenylchloroantimony and Phenyl diiodoantimony with Acid Chlorides and Alkyl Halides in Presence of Aluminum Chloride. <u>M. S. Malinovsky and S. P. Olifirenko</u> . . . . .	117	118
24. The Reactivity of the Alkali Salts of Dialkylthiophosphoric Acids. II. Acylation Reactions. <u>M. I. Kabachnik, T. A. Mastryukova, N. P. Rodionova and E. M. Popov</u> . . . . .	119	120
25. Alkyl- and Dialkylarsenious Acid Chlorides. <u>Gilm Kamai and Z. L. Khisatova</u> . . . . .	125	126
26. Alkamino Esters of Some Heterocyclic Acids as Possible Hypotensive Agents. <u>M. V. Rubtsov, E. S. Nikitskaya and V. S. Usovskaya</u> . . . . .	129	130
27. The Preparation and Properties of Ethyl-N-(2-Quinuclidinyl) Urethane. <u>M. V. Rubstov and E. E. Mikhlin</u> . . . . .	135	135
28. The Stability of the Si-C Bond in Aromatic and Hydroaromatic Silanes to the Action of Acidic Reagents. <u>A. D. Petrov, T. I. Chernysheva and E. A. Chernyshev</u> . . . . .	139	138
29. The Condensation of o-Aldehydobenzoic Acid and Its Methyl Ester with Malonic Ester. <u>V. M. Rodionov and E. I. Chukhina</u> . . . . .	143	142
30. Absorption Spectra and Structure of Benzene Derivatives. XVIII. 3,4-Di- hydroxyacetophenone and Its Methyl Ethers. <u>N. A. Valyashko and N. N. Valyashko</u> . . . . .	147	146
31. Derivatives of 4-Hydroxy- and 4-Butoxy-5,6,7,8-Tetrahydronaphthalene-2- Carboxylic Acids. <u>S. I. Sergievskaya and E. G. Popova</u> . . . . .	155	153
32. Mechanism for the Cleavage of Arylsulfonylglycines and Their N-Derivatives. <u>L. N. Nikolenko and V. A. Koptug</u> . . . . .	159	156
33. The Chemistry of Heterocycles. XXIII. The Synthesis of 9-Phenylacridine Based on 2-Aminotriphenylcarbinol and the Mechanism of This Transformation. <u>P. A. Petyunin, N. G. Panferova and M. E. Konshin</u> . . . . .	163	159
34. The Reaction of a Hydrochloric Acid Solution of Iodine Chloride with Barbituric Acid Derivatives. II. Barbiturates Containing a Cyclohexenyl Group. <u>L. I. Rapaport</u> . . . . .	167	161
35. The Mechanism of the Arbuzov Rearrangement. II. Reaction of $\alpha,\beta$ -Dibromoethyl and $\alpha,\beta$ -Dichloroethyl Isopropyl and $\alpha,\beta$ -Dibromomethyl and $\alpha,\beta$ -Dichloroethyl Butyl Ethers with Phosphites. <u>V. S. Abramov and A. P. Pekhman</u> . . . . .	171	163

## TABLE OF CONTENTS (continued)

	Page	Russ. page
36. The Synthesis and Properties of Sulfamethine — A New Antitubercular Compound. <u>L. M. Kulberg, S. G. Rykliis, P. A. Yufa and R. P. Veltman</u> .....	175	168
37. Alkaloids of <i>Galanthus woronovi</i> . V. Isolation of Galanthamidine. <u>N. F. Proskurnina and A. P. Yakovleva</u> .....	179	172
38. Alkaloids of the Plants of the Poppy Family. <u>T. F. Platonova, P. S. Massagetov, A. D. Kuzovkov and L. M. Utkin</u> .....	181	173
39. Conjugated Addition Reactions of Halogens to Olefins. V. Nitrogen $\beta$ -Halo-alkylation. <u>A. I. Titov and V. G. Kuzmin</u> .....	187	180
40. The Mechanism of Inhibitor Action. <u>L. I. Kāshtanov and N. V. Kazanskaya</u> .....	191	184
41. Acetylene Derivatives. 171. Heterocyclic Compounds. XXXII. Hydration of Heterocyclic Alcohols and Glycols of the Acetylene Series. <u>I. N. Nazarov and L. N. Ivanova</u> .....	195	186
42. Cycloalkylation of Aromatic Compounds. IX. The Reaction of 1-Phenylcyclohexanol with Benzene. <u>N. G. Sidorova, N. M. Feiershtein and E. A. Kochetkova</u> .....	201	191
43. The Symmetrization of Methylenechlorosilanes. <u>K. A. Andrianov, S. A. Golubtsov and N. P. Lobusevich</u> .....	207	197
44. The Action of Aromatic Diazonium Compounds on Unsaturated Compounds. V. Azo-Coupling with Simple Vinyl Ethers. <u>A. P. Terentyev and V. A. Zagorevsky</u> .....	211	200
45. Alkylation of Diphenyl with Alcohols in the Presence of $\text{BF}_3$ . <u>I. A. Romadan and T. I. Rendel</u> .....	215	202
46. The Preparation and Properties of N-Arylmaleimides. <u>A. E. Kretov and N. E. Kulchitskaya</u> .....	221	208
47. Synthesis of Some 3,6-Endoxohexahydrophthalic Acid Derivatives. <u>N. N. Melnikov and V. A. Kraft</u> .....	227	213
48. Quinoline Derivatives. XII. <u>B. I. Ardashev and B. A. Tertov</u> .....	233	218
49. The o-Toluidides of Diarylglycolic Acids and Their Transformation Into 3,3-Diaryl-7-Methyloxindoles. XXIV. <u>P. A. Petyunin and A. S. Pesis</u> .....	239	223
50. Synthesis and Transformations of $\alpha$ -Glycols of the Ethylene Series. V. 2-Methyl-3,5-Diphenyl-4-Penten-2,3-Diol. <u>L. F. Chelpanova, Z. V. Printseva and V. A. Kormer</u> .....	243	227
51. The Preparation of Arylhalomonosilanes. <u>E. M. Sochestvenskaya</u> .....	247	231
52. The Reaction Products of 2,4-Dinitrophenylpyridinium Chloride with Diamines. <u>N. E. Grigoryeva and I. K. Gintse</u> .....	249	232
53. The Synthesis of a Number of Derivatives Based on 2,4-Dichloro-2-Butene. Synthesis and Properties of 2-Chloro-4-Mercapto-2-Butene. <u>A. L. Klebansky and G. T. Essayan</u> .....	255	239
54. Naphthofuroxan. IV. Derivatives of 1,2-Naphthoquinone-6-Sulfonic Acid Dioxime. <u>S. V. Bogdanov and I. N. Koroleva</u> .....	259	243

## TABLE OF CONTENTS (continued)

	Page	Russ. page
55. Catalytic Condensation of Acetylene with Aromatic Amines. XXV. Synthesis of 2-(Hydroxyphenyl)Quinoline Derivatives. <u>N. S. Kozlov and L. Yu. Pinegina</u> . . . . .	263	247
56. The Acid Chlorides of Partial Aromatic Esters of Arylsulfonimidophosphoric Acids. <u>A. V. Kirsanov and V. I. Shevchenko</u> . . . . .	267	250
57. The General Definition of Chemical Science (A Discussion). <u>Yu. A. Zhdanov</u> . . .	271	254
58. Amino Acid Amidines of the Dihydropyrazine Series. I. Preparation from the Imino Ether of (O,O-Dibenzyl-2,5-Dihydropyrazine)Amidines. <u>R. G. Petrova and N. I. Gavrilov</u> . . . . .	275	258
59. Naphthofuroxan. V. Sulfonation and Chlorination of Naphthofuroxan. <u>S. V. Bogdanov and L. N. Koroleva</u> . . . . .	281	264
60. Synthesis of Trialkylsilanephosphoric Acids. <u>K. A. Andrianov, B. N. Rutovsky and A. A. Kazakova</u> . . . . .	285	267
61. Alkoxydianilidophosphazosulfonaryls. <u>V. I. Shevchenko and V. V. Bondarev</u> . . . .	287	270
62. 2-Nitro-Perinaphth-1,3-Indandione and Some of Its Derivatives. <u>E. Yu. Gudrinietse, E. Ya. Dreimanis and G. Ya. Vanag</u> . . . . .	289	272
63. Catalytic Transformations of Heterocyclic Compounds. XLVII. Mechanism of the Catalytic Dehydration of 2,2,5,5-Tetramethylfuranidine. <u>Yu. K. Yuryev and G. Ya. Kondratyeva</u> . . . . .	293	275
64. Reaction of a Hydrochloric Acid Solution of Iodine Chloride with Barbituric Acid Derivatives. III. Thiobarbiturates. <u>L. I. Rapaport and Ya. A. Fialkov</u> . . .	297	279
65. Aconite Alkaloids. VII. Monoacetylsongorine - A New Alkaloid from <u>Aconitum songoricum</u> Staph. <u>A. D. Kuzovkov and P. S. Massagetov</u> . . . . .	299	281
66. Alkaloids of <u>Leontice Ewersmannii</u> BGE. III. Leontine, The Structure of the Heterocyclic Nucleus. <u>T. E. Platonova and A. D. Kuzovkov</u> . . . . .	301	283



February, 1956

## TABLE OF CONTENTS

	Page	Russ. Page
1. In Memory of Professor N.A. Valyashko (1871-1955). <u>A.E. Lutsky and V.I. Atroshchenko</u> . . . . .	305	289
2. Absorption Spectra and Structure of Benzene Derivatives. XIX. 2,5-Dihydroxyacetophenone and Its Methyl Ethers. <u>N.A. Valyashko and N.N. Valyashko</u> . . . . .	311	294
3. Enthalpies of Formation of Compounds of Zinc with Antimony. <u>S.A. Shchukarev, M.P. Morozova and Yu.P. Sapozhnikov</u> . . . . .	321	304
4. Formation of Sulfides by Reaction of Ferrous Sulfide with Oxides of Metals. II. Reaction of FeS with SiO <sub>2</sub> in Presence of Carbon. <u>Zh.L. Vert. and M.V. Kamentsev</u> . . . . .	325	307
5. Hydrolysis of Salts. I. Perchlorates of Elements of the Second Group of the Periodic System. <u>L.S. Lilich and M.E. Mogilev</u> . . . . .	331	312
6. Hydrolysis of Salts. II. Halides of Zinc, Cadmium and Mercury. <u>L.S. Lilich and Yu.S. Varshavsky</u> . . . . .	337	317
7. Dipole Moments of Some Complex Compounds of Titanium and Tin Tetrachlorides. VII. <u>O.A. Osipov</u> . . . . .	343	322
8. The Ternary Reciprocal System of the Chlorides and Sulfates of Potassium and Calcium. <u>M.S. Golubeva and A.G. Bergman</u> . . . . .	349	328
9. Complex Formation and Double Decomposition in the Reciprocal System of the Fluorides and Sulfates of Lead and Potassium. <u>V.A. Gladushchenko and A.G. Bergman</u> . . . . .	359	339
10. Study of the Systems Sodium Sulfate - Cobalt Sulfate and Sodium Sulfate - Nickel Sulfate. <u>K.A. Bolshakov and P.I. Fedorov</u> . . . . .	367	348
11. Cation Exchange in Mixed Solvents on Volkonskolte. <u>A.T. Davydov and R.F. Skoblionok</u> . . . . .	371	350
12. Thiocyanate-Halide Compounds of Divalent Mercury in Solution. <u>K.B. Yatsimirsky and B.D. Tukhlov</u> . . . . .	377	356
13. Determination of the Solubility of Co[Hg(CNS) <sub>4</sub> ]. <u>I.M. Korenman, F.R. Sheyanova and M.N. Baryshnikova</u> . . . . .	387	365
14. Stratification in Ternary Systems When the Component Binary Systems are Homogeneous. <u>I.L. Krupatkin</u> . . . . .	393	370
15. Physico-Chemical Investigation of Systems Containing Dioxane. VIII. The System Sulfuric Acid - Dioxane. <u>Ya.F. Mezheny</u> . . . . .	397	375
16. Investigation of Complex Formation in the System Aluminum Chloride-Urea-Water by the Methods of Physico-Chemical Analysis. <u>B.Ya. Rabinovich</u> . . . . .	399	377
17. Camphorates of Some Rare Earth Elements. <u>Ya.Ya. Dodonov and S.B. Pirkes</u> . . . . .	401	379
18. Double Salts of Lanthanum, Cerium, Praesodymium and Neodymium with Triphenylbenzylphosphonium Nitrate. <u>G.V. Medoks</u> . . . . .	403	382
19. Inner Complex Salts of Azo Compounds. III. Reaction of Copper Salts with Some o-Hydroxy- and o-Amino-, o'-Alkoxy- and -o'-Aroxy-Monoazo Compounds. <u>V.I. Mur</u> . . . . .	405	384

February, 1956

## TABLE OF CONTENTS (continued)

	Page	Russ. Page
20. Some Salts of Imidosulfamide. <u>L.M. Volshtein, N.N. Pisarzhevskaya and M.M. Slutskaya</u> .....	411	389
21. Reactions of Metallic Oxides with Alcohols. III. Reactions of Manganese Oxides with Isopropyl and Other Alcohols. <u>V.A. Komarov, N.P. Timofeeva and T.M. Moroshkina</u> .....	415	393
22. Synthesis of Hydrocarbons. LIII. Isoprene Hydrobromide in the Synthesis of Hydrocarbons with a Quaternary Carbon Atom - Tert.-Alkylethylenes. <u>R.Ya. Levina, V.R. Skvarchenko and T.M. Ushakova</u> .....	421	398
23. Reaction of Dioxane with Acetic Acid and Acetic Anhydride. <u>K.N. Kovalenko, N.A. Trifonov and D.S. Tissen</u> .....	427	403
24. Investigations on Conjugated Systems. LX. Reaction of Divinylethylacetylene with Tertiary Butyl Chloride and Bromide. <u>A.A. Petrov and K.V. Leets</u> .....	431	407
25. Action of Acetyl Chloride and Acetic Anhydride Upon Alkyl Esters of Arsenious Acid. <u>Gilm Kamai and Z.L. Khisamova</u> .....	435	411
26. Tertiary Trihydric Alcohols of the Acetylenic Series and Their Transformations. IX. Dehydration of 2-Methyl-5-(1-Hydroxycyclohexyl)-Hexyne-3-Diol-2,5- and 2,4-Di-(1-Hydroxycyclohexyl)-Butyne-3-Ol-2. <u>V.I. Nikitin and A.Kh. Khamatov</u> ..	439	416
27. The Mechanism of Dehydration of $\gamma$ -Glycols. II. Study of the Dehydration of 2,5-Dimethylhexanediol-2,5; 4-Methylhexanediol-1,4 and 4-Methyloctanediol-1,4. <u>T.A. Favorskaya and N.P. Ryzhova</u> .....	447	423
28. The Chlorination of Ketene. <u>B.A. Porai-Koshits, L.S. Efros and K.Yu. Maryanovskaya</u> ..	451	426
29. Synthesis and Investigation of 1,1-Di- $\alpha$ -Naphthyl-2-Phenyl-2-Bromoethylene. <u>A.M. Khaletsky and A.Ya. Kaplan</u> .....	455	431
30. Investigation of the Action of Bromine Upon 1-Phenyl-1- $\alpha$ -(or $\beta$ )-Naphthyl-2-Methylethylenes. <u>A.M. Khaletsky and A.Ya. Kaplan</u> .....	459	434
31. Synthesis of Steroid Compounds and Related Substances. XXXIV. 9-Methyl-1,6-Diketo- $\Delta^5$ -Octahydronaphthalene. <u>I.N. Nazarov, S.I. Zavylov, M.S. Burmistrova, I.A. Gurvich and L.I. Shmonina</u> .....	465	441
32. $\beta$ -(pyridyl-4)-Glutaric Acid and the Products of Its Transformations. <u>M.V. Rubtsov, E.E. Mikhlin and V.Ya. Furshtatova</u> .....	469	445
33. Some Products of Transformation of Tetralin Hydroperoxide. <u>A.I. Kamneva and L.A. Salmin</u> .....	473	449
34. Sulfonation and Sulfonic Acids of Acidophobic Compounds. XXV. Application of Dioxane Sulfotrioxide to the Determination of Mono- and Polyhydroxy Compounds. <u>A.P. Terentyev and N.B. Kupletskaya</u> .....	475	451
35. Imidazole Derivatives. XIV. Oxidation of Benzimidazole and Its Methyl Derivatives. <u>L.S. Efros, N.V. Khromov-Borisov, L.R. Davidenkov and M.M. Nedel</u> .....	479	455
36. Imidazole Series. III. Action of $\alpha$ -Halo Ketones on 2-Mercaptoimidazoles. <u>P.M. Kochergin and M.N. Shchukina</u> .....	483	458
37. Aminoacriquine and Its Analogs. <u>A.M. Grigorovsky and T.A. Veselitskaya</u> .....	491	466
38. Oxidative Action of Some Acyl Peroxides. <u>G.A. Razuvaev, L.V. Stupen and K.S. Minsker</u> .....	497	473



February, 1956

## TABLE OF CONTENTS (continued)

	Page	Russ. Page
39. Synthesis and Polymerization of Thioesters of Methacrylic Acid. <u>M.M. Koton, T.M. Kiseleva and K.S. Podgorskaya</u> .....	499	475
40. Heterocyclic Compounds. 35. Condensation of Tetrahydro- $\gamma$ -Pyrone and Tetrahydro- $\gamma$ -Thiopyrones with Organomagnesium and -Lithium Compounds. <u>I.N. Nazarov and E.T. Golovin</u> .....	501	477
41. Heterocyclic Compounds. 36. The Mannich Reaction with Heterocyclic Ketones ( $\gamma$ -Piperidones, Tetrahydro- $\gamma$ -Pyrone and Tetrahydro- $\gamma$ -Thiopyrones). <u>I.N. Nazarov and E.T. Golovin</u> .....	507	483
42. The Mannich Reaction in the Thiazole Series. <u>B.M. Mikhailov and I.K. Platova</u> ....	515	491
43. Organic Insectofungicides. XVIII. A New Method for the Preparation of Esters of Chloro- and Dichlorothiophosphoric Acids. <u>Z.M. Bakanova, Ya.A. Mandelbaum, N.N. Melnikov and E.I. Svetsitsky</u> .....	519	494
44. Organic Insectofungicides. XIX. Synthesis of Mixed Esters of Dithiophosphoric Acid Containing an Amide Group in the Aliphatic Ester Radical. <u>K.D. Shvetsova-Shilovskaya, N.N. Melnikov and N.I. Martemyanova</u> .....	523	496
45. Quinoline and Its Derivatives. XIII. Synthesis of Quinoline Bases from Diamines of the Diphenyl Series. <u>B.I. Adrashev and Yu.M. Kozlenko</u> .....	527	498
46. A Study of the Sulfonation Reaction. XXXVIII. The Preparation and Properties of 1,8-Naphthalenedisulfonic Acid. <u>B.I. Karavaev and A.A. Spryskov</u> .....	529	501
47. The Reaction of Trichlorophosphazonesulfonyls with Alcohols. <u>A.V. Kirsanov and V.I. Shevchenko</u> .....	533	504
48. The Condensation of Acenaphthenequinone with 1,3-Indandione. <u>G.Ya. Vanag and L.S. Geita</u> .....	539	511
49. Cycloalkylation of Aromatic Compounds. X. The Condensation of 1,4-Cyclohexanediol and 4-Chlorocyclohexanol with Benzene. <u>N.G. Sidorova and Yu.V. Valibekov</u> .....	545	516
50. A New Synthesis of $\beta$ -4-Nitrophenyl- $\beta$ -Alanine. <u>V.M. Rodionov, N.N. Suvorov and V.G. Avramenko</u> .....	551	520
51. Behavior of Diphenyl- and Triphenylamines Toward Oxidizing Agents. X. <u>V.S. Smirnov</u> .....	557	526
52. Behavior of Cyclohexanone Azine and Phenylhydrazone Toward Oxidizing Agents. XI. <u>V.S. Smirnov</u> .....	561	528
53. Formation of Polyamide Resins. V. Participation of Polymerization and Polycondensation Reactions in Transformation of $\epsilon$ -Caprolactam into Polymers. <u>A.S. Shpitalnyi</u> .....	563	530
54. Reaction of Mesitylmagnesium Bromide with the Allyl Esters of Trimethylacetic and Formic Acids. <u>E.B. Sokolova and M.E. Dolgaya</u> .....	569	534
55. Structure of Chlorophenoxycrotonic Acids. <u>V.P. Mamaev and N.N. Suvorov</u> .....	573	538
56. High-Molecular Compounds. XCIII. Properties of the Polyesters of Tetramethylene Glycol and 1,3-Butanediol. <u>V.V. Korshak and S.V. Vinogradova</u> .....	575	539
57. High-Molecular Compounds. XCIV. Polyesters of Trimethylene and Pentamethylene Glycols. <u>V.V. Korshak and S.V. Vinogradova</u> .....	581	544
58. Synthesis of $\omega, \omega'$ -Diamino-p-Xylene and Its Derivatives. <u>I.P. Losev, O.Ya. Fedotova and M.L. Kerber</u> .....	585	548

## JOURNAL OF GENERAL CHEMISTRY OF THE U.S.S.R. IN ENGLISH TRANSLATION

February, 1956

## TABLE OF CONTENTS (continued)

	Page	Russ. Page
59. Synthesis of 3-Aryl- and 2,3-Diarylthiazolidines. <u>Yu.K. Yuryev and L.S. German...</u>	589	550
60. Catalytic Transformations of Heterocyclic Compounds. XLVIII. Preparation of 3-Isoamyl-, 3-Hexyl- and 3-p-Tolyltetrahydrothiophenes from the Corresponding Furanidines. <u>Yu.K. Yuryev, E.M. Lukina, Yu.M. Polikarpov and V.P. Volkov ...</u>	593	553
61. Syntheses with Acrylonitrile. XXV. Cyanoethylation of Indole. <u>A.P. Terentyev, A.N. Kost and V.A. Smit</u> .....	597	557
62. Quinones. VII. Synthesis of Some Quinones of the Dihydro- and Tetrahydronaphthalene Series by Oxidation of the Corresponding Hydroquinones with Potassium Bromate. <u>A.N. Grincev, A.B. Terentyev and A.P. Terentyev</u> .....	601	560
63. Quinones. VIII. Condensation of Chloro- and 2,3-Dichloro-p-Benzoquinone with Acetoacetic and Benzoylacetic Esters. <u>A.N. Grincev, Pan Bon-Khvar, V.N. Frosin and A.P. Terentyev</u> .....	603	561
64. Reaction of Hydrazine Derivatives. II. Synthesis of 1,2,3,4,5,6,7,8-Octahydrocarbazole. <u>A.N. Kost and I.I. Grandberg</u> .....	607	565
65. Halogenation of Aromatic Silanes. I. Preparation and Properties of the Chloro Derivatives of Phenyltrichlorosilane. <u>A.Ya. Yakubovich and G.V. Motsarev</u> .....	611	568
66. Synthesis of Physiologically Active Putrescine Derivatives. <u>A.A. Ryabinin, A.D. Panashchenko, I.L. Anisimova and G.Yu. Levina</u> .....	619	577
67. Fritillaria Alkaloids. I. Alkaloids of <i>Fritillaria Raddeana</i> Rgl. <u>Kh.A. Aslanov and A.S. Sadykov</u> .....	623	579
68. Hexaalkyldisilanes. <u>M.G. Voronkov and Yu.I. Khudobin</u> .....	629	584
69. Synthesis of p-Divinylbenzene. <u>I.M. Ezrielev, N.A. Larin, O.M. Neimark and Z.D. Tolstikova</u> .....	635	589
70. Selective Dehalogenation of Dichloroacridines with the Aid of Skeletal Nickel. <u>V.S. Fedorov</u> .....	639	591
71. Direct Synthesis of Aryl $\beta$ -Chlorovinyl Ketones. <u>N.K. Kochetkov, A.Ya. Khorlin and M.Ya. Karpeisky</u> .....	643	595
72. Oxidation of Cyclooctatetraene to Terephthalic Acid. <u>V.D. Azatyan and G.T. Esayan</u> .....	647	599
73. The Condensation of Cyclohexanone with Ammonia. <u>G.A. Razuvaev, E.N. Zilberman and S.V. Svetozarsky</u> .....	649	601
74. The Oxidizability of 1,2-Diphenyl-4-n-Butylpyrazolidin-3,5-Dione. <u>V.N. Sokolova and O.Yu. Magidson</u> .....	653	604
75. Preparation of $\alpha$ -Naphthylnitromethane and Its Derivatives. <u>L. Zalukaev and E. Vanag</u> .....	657	607
76. Pyrido-(3,4-d)-Thiazole Derivatives. <u>S.G. Fridman</u> .....	663	613

March, 1956

## TABLE OF CONTENTS

	Page	Russ. page
1. Chemical Industry and Science in the Sixth Five-Year Plan. <u>G. V. Zavarukhin</u> .....	I	I
2. Thermographic Investigation of the Most Important Saturated Heteropoly Acids. <u>E. A. Nikitina and E. V. Buris</u> .....	717	621
3. Study of Chlorination Reactions of Titanium Monoxide. <u>A. N. Zelikman and T. Segarchanu</u> .....	721	625
4. Double Decomposition, Complex-Formation and Polymorphism in Adiaagonal Reciprocal System of Chlorides and Sulfates of Potassium and Cadmium. <u>A. G. Bergman and E. L. Bakumskaya</u> .....	725	629
5. Reciprocal System of Lithium and Barium Silicates and Fluorides. <u>N. A. Bychkova and A. G. Bergman</u> .....	735	639
6. Equilibrium Diagram of the $\text{Na}_2\text{Cl}_2\text{-K}_2\text{Cl}_2\text{-CaSO}_4$ System. <u>V. V. Rubleva and A. G. Bergman</u> .....	747	651
7. Study of Phosphate Complexes in Solution. I. Phosphate Complexes of Iron. <u>A. T. Pilipenko and L. N. Ivashchenko</u> .....	751	656
8. Oxalate Complexes of Iron (III). <u>A. K. Babko and L. I. Dubovenko</u> .....	757	660
9. Viscosity Calculations of Binary Systems. II. <u>R. P. Airapetova and N. T. Redkorebrova</u> .....	765	668
10. A New Synthesis of Imidodisulfonates. <u>E. N. Zilberman and M. M. Smirnova</u> .....	771	672
11. Some Esters of Butanearsonous Acid. <u>K. I. Kuzmin</u> .....	775	675
12. Synthesis of Some Mercaptans and Disulfides Labeled with Radioactive Sulfur Isotope. <u>V. N. Vasilyeva and E. N. Guryanova</u> .....	777	677
13. Catalytic Transformations of Amines Over Aluminomolybdenum Catalyst. <u>A. F. Plate, M. E. Volpin, E. A. Reformatskaya and S. V. Zotova</u> .....	785	684
14. Dehydration of Substances Using Vacuum and Deep Freezing. <u>Ya. Ya. Dodonov and S. B. Pirkes</u> .....	791	690
15. The Synthesis of Acetylenes by Exhaustive Methylation. <u>Ya. M. Slobodin and N. A. Selezneva</u> .....	793	691
16. The Reaction of Trimethylamine with Polyhalides. <u>Ya. M. Slobodin and N. A. Selezneva</u> .....	797	694
17. Ozonization of Unsaturated Compounds. II. A Study of the Curves for the Absorption of Ozone by Unsaturated Compounds and Their Mixtures. <u>A. I. Yakubchik and N. G. Kasatkina</u> .....	803	699
18. Oxygen-Containing Organosilicon Compounds. V. Preparation of Organo-Silicon Acetals. <u>M. F. Shostakovsky, I. A. Shikhiev and V. I. Belyaev</u> ...	811	706

## TABLE OF CONTENTS (continued)

	Page	Russ. page
19. Catalytic Amination of Organic Compounds. III. The Catalytic Amination of Ethers and Esters of Phenol. <u>N. S. Kozlov and L. F. Akhmetshina</u> . . . . .	815	709
20. Action of Nitrogen Peroxide on Undecylenic Acid. <u>S. V. Vasilyev</u> . . . . .	819	712
21. The Configuration and Properties of Unsaturated Acids and Their Derivatives. V. The Properties of Angelic and Tiglic Acids and Their Esters. <u>A. K. Plisov and A. P. Kostyuk</u> . . . . .	823	715
22. Syntheses with Acrylonitrile. XXVI. Synthesis of Some $\beta$ -Alkoxypropionamides. <u>A. P. Terentyev, A. N. Kost and A. M. Berlin</u> . . . . .	827	719
23. Syntheses with Acrylonitrile. XXVII. The Diene Synthesis Reaction of Substituted Acrylonitriles. <u>V. G. Yashunsky, A. P. Terentyev and Ya. G. Nekhlín</u> . . . . .	831	723
24. Quinones. IX. The Reaction of 5,8-Endoethylene-1,4-Naphthoquinone with Hydrogen Chloride and with Acetoacetic Ester. <u>A. N. Grinev, A. B. Terentyev and A. P. Terentyev</u> . . . . .	837	730
25. High-Molecular Compounds. XCV. The Polyesters of Thiodivaleric Acid. <u>V. V. Korshak and S. V. Vinogradova</u> . . . . .	841	732
26. High-Molecular Compounds. XCVI. Synthesis and Polymerization of 4-Vinylphenylethane. <u>G. S. Kolesnikov, V. V. Korshak and I. P. Kulyulin</u> . . . . .	845	735
27. Synthesis and Transformations of Vinyl Ethers of Higher Polyatomic Alcohols and Cellulose. II. Vinyl Ethers Based on Cellulose. <u>M. F. Shostakovsky, E. N. Prilezhaeva and L. V. Tsymbal</u> . . . . .	849	739
28. Transformation and Synthesis of Carbohydrates. XIV. Steric Hindrance in the Azo-Coupling of Arylglucamines. <u>V. M. Berezovsky and E. P. Rodionova</u> . . . . .	855	745
29. Cyanoethylated Ketones in the Synthesis of Unsaturated $\delta$ -Lactones. V. The Synthesis and Properties of Unsaturated $\delta$ -Lactones from Monocyanoethylated Acetone and Cyclohexanone. <u>N. P. Shusherina, R. Ya. Levina and M. Yu. Lurye</u> . . . . .	861	750
30. Structure of the Triacetyl Derivative of 4,5-Diaminouracil. <u>V. I. Khmelevsky and O. I. Dumitsyna</u> . . . . .	867	755
31. Synthesis and Study of 2-Phenyl-1,3-Indandione. <u>A. M. Khaletsky, M. B. Kolesova and R. M. Metrikina</u> . . . . .	871	760
32. Reductive Properties of $\alpha$ -Naphthylmethylmagnesium Chloride in Some Grignard Reactions. <u>A. M. Khaletsky and A. Ya. Kaplan</u> . . . . .	873	762
33. The Preparation and Some Properties of 1-(2-Furyl)-3-Methyl-1-Buten-3-ol. <u>A. A. Arsenyuk</u> . . . . .	877	766
34. The $\beta$ -Chloroethylamide of Nicotinic Acid. <u>G. I. Braz and V. A. Skorodumov</u> . . . . .	881	770
35. The Chemistry of Chloromycetin (Levomycesin). VIII. The Dependence of the Antimicrobial Activity of Chloromycetin on Its Structure and the Mechanism of Chloromycetin Action. <u>M. M. Shemyakin, M. N. Kolosov, M. M. Levitov, K. I. Germanova, M. G. Karapetyan, Yu. B. Shvetsov and E. M. Bamdas</u> . . . . .	885	773

## TABLE OF CONTENTS (continued)

	Page	Russ. page
36. The Synthesis of Dihexylfluorescein. <u>B. N. Afanasyev and M. S. Chernavina</u> . . . . .	895	783
37. Preparation of 10-Vinylacridone. <u>B. I. Mikhantsev and V. A. Sklyarov</u> . . . . .	897	784
38. Structure and Chemical Transformations of Alkali Organic Compounds of Anils. II. The Transformations of Disodium and Dilithium Compounds of Benzophenonephenylimide Under the Influence of Alkyl Halides. <u>B. M. Mikhailov and K. N. Kurdyumova</u> . . . . .	899	786
39. The Synthesis of N-Carbazolepropene Oxide. <u>I. M. Ezrielev and N. A. Larin</u> . . . . .	905	791
40. Synthesis and Separation of Diastereoisomeric $\gamma$ -Ethyl- $\beta$ -Aminocaprylic Acids and Their Derivatives. <u>V. M. Rodionov and V. K. Zvorykina</u> . . . . .	907	793
41. Synthesis of Thiazole Derivatives. XI. Some New Hydrazines of the Benzothiazole Series. <u>V. M. Zubarovsky</u> . . . . .	911	797
42. Catalytic Amination of Organic Compounds. IV. Catalytic Amination of Nitro Compounds of the Aromatic Series. <u>N. S. Kozlov and G. N. Kozlov</u> . . . . .	917	803
43. The Preparation of Arylsulfonyl Derivatives of Amino Acids. <u>L. N. Nikolenko</u> . . . . .	921	806
44. Organic Insectofungicides. XX. The Synthesis of Mixed Esters of Thiophosphoric Acid Containing Heterocyclic Radicals. <u>K. D. Shvetsova-Shilovskaya, N. N. Melnikov and A. F. Grapov</u> . . . . .	925	808
45. The Interaction of Dialkylphosphorous Acids with Aldehydes and Ketones. IX. Di-Tert-( $\beta$ ', $\beta$ ', $\beta$ ')-Trichloro-Butyl Esters of Substituted $\alpha$ -Hydroxymethyl-phosphinic Acid. <u>V. S. Abramov and V. K. Khairullin</u> . . . . .	929	811
46. Acetylene Derivatives. 172. The Mannich Reaction with $\beta$ -Cyanoethyl Ethers of Acetylenic Alcohols. <u>I. N. Nazarov and G. A. Shvekhgeimer</u> . . . . .	933	813
47. The Synthesis of Steroids and Related Compounds. XXXI. Condensation of Halogen Derivatives of the Allyl Type with Cyclic 1,3-Diketones and Inner-Molecular Cyclization (with Loss of Water) of the Resultant Compounds. <u>I. N. Nazarov; S. N. Ananchenko and I. V. Torgov</u> . . . . .	939	819
48. Heterocyclic Compounds. 37. Synthesis of Heterocyclic Aminoalcohols and Their Esters. <u>I. N. Nazarov and E. T. Golovin</u> . . . . .	951	832
49. The Problem of the Reactivity of Dialkylaminomethyl Alkyl Ethers and Compounds of Similar Structure. <u>K. G. Mizuch and R. A. Lapina</u> . . . . .	957	839
50. Tautomeric Compounds. XX. The Mobility of the Hydrogen Atoms of the Methyl Groups of Nitrotoluenes. <u>A. E. Porai-Koshits and I. I. Chizhevskaya</u> . . . . .	961	842
51. Some Properties of Enol Acetates. I. Reaction of the Enol Acetate of Cyclohexanone with N-Bromosuccinimide. <u>I. V. Machinskaya and V. A. Barkhash</u> . . . . .	967	848
52. Reaction of $\beta$ -Chlorovinyl Ketones with $\beta$ -Dicarbonyl Compounds. II. The Keto-vinylation of Alkylmalonic Esters. <u>N. K. Kochetkov and L. I. Kudryashov</u> . . . . .	971	851
53. Nitrogen-Containing Derivatives of Esters of Meso- $\alpha$ , $\alpha'$ -Diphenylsuccinic Acid. <u>S. F. Torf and N. V. Khromov-Borisov</u> . . . . .	977	856
54. Derivatives of Pyrido-(3,2-d)-Thiazole. <u>S. G. Fridman</u> . . . . .	985	864
55. Derivatives of Benzothiazole II. Reaction of 2-Benzothiazole Sulfonic Acid with Nitrogen Bases. <u>L. R. Davidenkov and B. A. Porai-Koshits</u> . . . . .	989	868

## TABLE OF CONTENTS (continued)

	Page	Russ. page
56. Tautomeric Compounds. XXI. Tautomerism of Derivatives of Dipyrazolonyl-Phenyl-Methane. <u>A. E. Poral-Koshits, B. A. Poral-Koshits and N. G. Lipina</u> . . . . .	993	872
57. Chemical Structure and Parasitocidal Activity. XIX. Synthesis of 6-Methoxy-8-(4'-Aminopentyl)-Aminoquinoline. <u>M. B. Braude and V. I. Stavrovskaya</u> . . . . .	999	878
58. Sulfonation and Sulfonic Acids of Acidophobic Compounds. XXVI. Use of Dioxane-Sulfotrioxide for the Determination of Aromatic Amines and Aldehydes. <u>A. P. Terentyev, N. B. Kupletskaya and E. V. Andreeva</u> . . . . .	1003	881
59. Hydroxydihydrofurans. IV. The Problem of the Basic Properties of Substituted 2-Hydroxydihydrofurans-2, 5. <u>E. D. Venus-Danilova and A. Fabritsy</u> . . . . .	1007	884
60. Reaction of m-Nitrophenol with Symmetrical Mercury Compounds. <u>V. F. Martynova</u> . . . . .	1017	891
61. Syntheses in the Series of Aromatic Derivatives of Thiourea. <u>K. M. Muravyeva and T. P. Sycheva</u> . . . . .	1021	898
62. Triphenylphosphazosulfonaryls. <u>A. V. Kirsanov and Z. D. Nekrasova</u> . . . . .	1027	903
63. Di-Acid Chlorides of Acylamidophosphoric Acids of the Aromatic Series. <u>A. V. Kirsanov and R. G. Makirta</u> . . . . .	1029	905
64. The Reaction of Phosphorus Pentachloride with Carboxylic Acid Amides. Tri-chlorophosphazacyls. <u>A. V. Kirsanov and R. G. Makirta</u> . . . . .	1033	907
65. $\alpha$ -Nitroacetophenone-o-Carboxylic Acid and Its Derivatives. <u>L. P. Zalukaev</u> . . . . .	1039	914
66. Synthesis of Hydrocarbons. LIV. Transformation of Hydrocarbons of the Cyclohexadiene Series Into Bicyclic Hydrocarbons Containing a Three-Membered Ring -(0,1,3)-Bicyclohexanes. <u>R. Ya. Levina, Kim Dyai Gir and E. G. Treshchova</u> . . . . .	1045	920
67. Tetraacyloxysilanes in the Synthesis of $\alpha$ , $\beta$ -Unsaturated Acids. I. Synthesis of Cinnamic Acid. <u>Yu. K. Yuryev, G. B. Elyakov and A. N. Vysokosov</u> . . . . .	1051	926
68. The Chemistry of Selenophene. II. Acylation of 3,4-Dimethylselenophene with Tetraacyloxysilanes. <u>Yu. K. Yuryev and N. K. Sadovaya</u> . . . . .	1057	930
69. Organocyclosiloxanes. I. Methylchlorocyclosiloxanes. <u>N. N. Sokolov, K. A. Andrianov and S. M. Akimova</u> . . . . .	1061	933
70. The Problem of the Structure of Gentianine. <u>N. F. Proskurnina and V. V. Shpanov</u> . . . . .	1065	936
71. Recollections of N. V. Shishkin . . . . .	1067	937



April, 1956

## TABLE OF CONTENTS

	Page	Russ. page
1. Lattice Energy of Salts Formed by Ions with Outer Envelopes of Eight Electrons. <u>A. F. Kapustinsky and K. B. Yatsimirsky</u> .....	1069	941
2. Methods of Establishing the Mechanism of the Co-precipitation of Radioelements with Precipitates of Difficultly Soluble Salts. <u>A. P. Ratner</u> .....	1077	949
3. Study of Properties of Acid Sulfates of Potassium. <u>N. S. Bannykh and Ya. E. Vilnyansky</u> .....	1081	952
4. Sulfates of Trivalent Chromium. <u>A. V. Pamfilov and N. N. Puchkova</u> .....	1085	955
5. Preparation of Fused Tantalum Carbide. <u>V. I. Smirnova and B. F. Ormont</u> .....	1089	958
6. Reciprocal Effect of Hydroxides During Fractional Precipitation from Their Solution. <u>N. N. Mironov and A. I. Odnosevtsev</u> .....	1093	960
7. Reaction of Rhenium with Cyanides of Iron. <u>A. I. Lazarev</u> .....	1099	965
8. Thermodynamic Characterization of NaOH, $\text{Na}_2\text{CO}_3$ and $\text{Na}_2\text{SO}_4$ at High Temperatures. <u>D. M. Ginzburg</u> .....	1103	968
9. Specific Heat of $\text{Na}_2\text{CO}_3$ , $\text{Na}_2\text{SO}_4$ and NaOH at High Temperatures. <u>M. M. Popov and D. M. Ginzburg</u> .....	1107	971
10. Reciprocal System of Chlorides and Iodides of Potassium and Lead with Internal Heterocomplex. <u>I. I. Ilyasov and A. G. Bergman</u> .....	1119	981
11. Ternary System of Five Ions $\text{Na}_2\text{CO}_3$ - $\text{K}_2\text{Cl}_3$ - $\text{K}_2\text{SO}_4$ . <u>A. K. Sementsova and A. G. Bergman</u> .....	1129	992
12. Oxalate Complexes of Iron (III). II. Instability Constant and Equilibrium Diagram. <u>A. K. Babko and L. I. Dubovenko</u> .....	1133	996
13. Complex Compounds of Phosphorus Pentachloride with Chlorides of Certain Elements. III. Study of Systems $\text{PCl}_5$ -HCl-Organic Solvent. <u>Ya. A. Flalkov and Ya. B. Buryanov</u> .....	1141	1003
14. Change of the Ionic Conductance of Liquid Chemical Compounds and Systems with Temperature. <u>M. A. Klochko</u> .....	1149	1010
15. Vapor Pressure of the Systems $\text{NaCl}$ - $\text{CaCl}_2$ - $\text{H}_2\text{O}$ and $\text{KCl}$ - $\text{CaCl}_2$ - $\text{H}_2\text{O}$ . <u>A. I. Mun</u> .....	1161	1021
16. Solubility of the Oxalates of Calcium, Strontium, Barium, Cadmium, Copper and Lead in Aqueous Solutions of Potassium Nitrate. <u>M. P. Babkin</u> .....	1167	1025
17. Investigation of the Ternary Systems $\text{NaNO}_3$ - $\text{NH}_4\text{NO}_3$ - $\text{H}_2\text{O}$ , $\text{KNO}_3$ - $\text{NH}_4\text{NO}_3$ - $\text{H}_2\text{O}$ , and $\text{RbNO}_3$ - $\text{NH}_4\text{NO}_3$ - $\text{H}_2\text{O}$ Via Methods of Physicochemical Analysis at 25°. <u>A. S. Karnaukhov</u> .....	1169	1027
18. Determination of the Isotopic Oxygen Composition in Organic Compounds. <u>R. V. Kudryavtsev, B. V. Ottesen and D. N. Kursanov</u> .....	1177	1035

TABLE OF CONTENTS (continued)

	Page	Russ. page
19. Study of the Mechanism of Hydrolysis with the Aid of the Heavy Oxygen Isotope. I. Hydrolysis of Ethyl Propionate in Alkaline Medium. <u>D. N. Kursanov and R. V. Kudryavtsev</u> .....	1183	1040
20. The Electrical Conductivity of Ternary Systems Composed of Amines, Acetic Acid and Water. <u>S. P. Miskidzhyan and I. A. Volina</u> .....	1185	1041
21. Electrolytic Dissociation in Nonaqueous Systems. IV. Aniline-Allyl Mustard Oil System. <u>S. P. Miskidzhyan</u> .....	1191	1046
22. Study of Phase Equilibria in the System Pyrimidin-Salicylic Acid-Water. <u>I. L. Krupatkin</u> .....	1197	1050
23. The Surface Tension of Binary Systems Formed by Urea with Acetic Acid and Its Chloro Derivatives. <u>Yu. I. Bokhovkina and I. M. Bokhovkin</u> .....	1207	1062
24. The Reaction of Ethanolamine with Diatomic Phenols. <u>D. E. Dionisyev and M. G. Kosareva</u> .....	1211	1065
25. The Influence of Nucleophilic Substances on Compounds of Structure $CCl_3CH=CRR'$ . <u>A. N. Nesmeyanov, R. Kh. Freidlina, L. I. Zakharkin and A. B. Belyavsky</u> .....	1215	1070
26. The Role of Oxygen in the Initial Stage of Vinyl Chloride Polymerization. <u>K. S. Minsker, A. S. Shevlyakov and G. A. Razuvaev</u> .....	1227	1082
27. Study of the Process for the Catalytic Hydropolymerization of Acetylene to Divinyl Over Palladium Catalyst. <u>Yu. A. Gorin and N. L. Derevyagina</u> .....	1233	1087
28. The Inhibited Oxidation of $\alpha$ -Pinene. <u>E. N. Novikova</u> .....	1243	1097
29. The Reactions for the Formation of Polyorganosiloxanes by the Heterofunctional Condensation Method. <u>K. A. Andrianov, N. N. Sokolov and E. N. Khrustaleva</u> .....	1249	1102
30. The Reaction of Tetrasubstituted Silanes with Carbon Tetrachloride. <u>G. A. Razuvaev and O. S. Dyachkovskaya</u> .....	1255	1107
31. Reactions of Unsymmetrical Acyl Peroxides with Mercury. <u>G. A. Razuvaev, Yu. A. Oldekop and V. N. Latyaeva</u> .....	1259	1110
32. Conjugated Systems. LXI. The Addition of Alkyl Halides to Diene Hydrocarbons. <u>A. A. Petrov and K. V. Leets</u> .....	1263	1113
33. Reaction of 1-Octyne with Lower Saturated Monobasic Acids. <u>A. I. Bolshukhin and A. G. Egorov</u> .....	1271	1121
34. The Synthesis of Alkylidene and Arylidene Glycol Esters of Acrylic and Methacrylic Acids. <u>I. A. Arbuzova, S. A. Plotkina and V. N. Efremova</u> .....	1275	1124
35. Synthesis of Chlorophenyl Esters of Methacrylic Acid. <u>I. A. Arbuzova, L. I. Medvedeva and S. A. Plotkina</u> .....	1279	1127
36. Syntheses Based on 1,4-Diacetylbenzene. <u>A. M. Sladkov and S. V. Vltt</u> .....	1283	1130
37. Tetrahydropyrimidine Compounds. III. Synthesis of Substituted 4-Piperonyl-6-Oxo-Tetrahydropyrimidines. <u>V. M. Rodionov and V. V. Kiseleva</u> .....	1287	1133
38. Isonicotinoylacetic Ester and Its Derivatives. <u>O. Yu. Magidson</u> .....	1291	1137

## TABLE OF CONTENTS (continued)

	Page	Russ. page
39. The Synthesis of Phthalazines by the Cyclization of the Acylhydrazones of Aromatic Aldehydes. <u>N. K. Kochetkov and L. A. Vorotnikova</u> .....	1297	1143
40. The Sequence of the Hydrogenation, Cyclization and Hydrogenolysis Reactions of Furan Derivatives on Nickel Catalysts. <u>A. A. Balandin and A. A. Ponomarev</u> .....	1301	1146
41. Hydroxydihydrofurans. V. Basic Properties of 5,5-Dimethyl-2-Tert-Butyl-4-Phenyl-2-Hydroxy-2,5-Dihydrofuran. <u>E. D. Venus-Danilova, A. Fabritsy and A. N. Orlova</u> .....	1317	1160
42. Syntheses in the Pyrimidine Series. II. Transformation of Diastereoisomeric $\gamma$ -Ethyl- $\beta$ -Aminocaprylic Acids into Substituted Tetra- and Hexahydro-pyrimidines. <u>V. M. Rodionov and V. K. Zvorykina</u> .....	1323	1165
43. Azomethine Dyes from Oxindole Derivatives. I. <u>M. S. Kisteneva</u> .....	1327	1169
44. Synthesis of Steroid Compounds and Substances Related to Them. XXXII. Stereochemistry of the Hydrogenation and Reduction of 6,9-Dimethyl-1-Keto- $\Delta^{4(10),5}$ -Hexahydronaphthalene. <u>I. N. Nazarov, S. N. Ananchenko and I. V. Torgov</u> .....	1333	1175
45. Synthesis of Steroid Compounds and Substances Related to Them. XXXIII. The Simpler Analogs of Corticosteroids. 1. Methods of Introducing the Dihydroxy-acetone, Glycerol and Dihydroxypropanecarboxylic Side Chains in Cyclic Compounds. <u>I. N. Nazarov and A. A. Akhrem</u> .....	1343	1186
46. Study of $\beta$ -Sitosterol. <u>A. M. Khaletsky and Li Chzhen-su</u> .....	1357	1201
47. Synthesis of $\Delta^{5,6}$ -Dehydroepianhydrosterone-17 from Pinewood Sterols ( $\beta$ -Sitosterol). <u>A. M. Khaletsky and Li Chzhen-su</u> .....	1361	1204
48. High-Molecular Compounds. XCVII. The Polymerization and Copolymerization of Some Silicoolefins. <u>V. V. Korshak, A. D. Petrov, N. G. Matveeva, V. F. Mironov, G. I. Nikitin and S. I. Sadykh-Zade</u> .....	1367	1209
49. High-Molecular Compounds. XCVIII. Dependence of the Properties of Mixed Polyamides on the Number of Hydrogen Bonds. <u>V. V. Korshak and T. M. Frunze</u> .....	1371	1212
50. The Reaction of Ketene with Nitrogen-Containing Bases. II. Acetylation of Imino and Imido Groups with Ketene. <u>Yu. V. Svetkin</u> .....	1375	1216
51. Sulfonic Acids of Sulfones as Secondary Products in Sulfonation Processes. I. Formation of Diphenyl Sulfone Sulfonic Acids in the Sulfonation of Benzene with Oleum. <u>A. P. Shestov</u> .....	1379	1219
52. Sulfonation and Sulfonic Acids of Acidophobic Compounds. XXVII. Alkylsulfuric Acids as Reagents for the Cleavage of Racemic Compounds. <u>A. P. Terentyev and V. M. Potapov</u> .....	1385	1225
53. Letter to the Editor. <u>M. I. Konarev</u> .....	1389	1228

May, 1956

## TABLE OF CONTENTS

	Page	Russ. Page
1. Photochemical Chlorination of Phenyltrichlorosilane. <u>A. D. Petrov, V. A. Ponomarenko, B. A. Sokolov and V. U. Roshal</u> . . . . .	1391	1229
2. Organolithium Synthesis and Properties of $\alpha$ - and $\beta$ -Alkenylsilanes. <u>A. D. Petrov and G. I. Nikishin</u> . . . . .	1395	1233
3. Synthesis of Silicon-Containing Ethers and Diethers. <u>S. I. Sadykhzade, I. I. Tsetlin and A. D. Petrov</u> . . . . .	1401	1239
4. Reaction of 1,4-Dilithiumdihydrodiphenyl with Alkyl Halides. <u>E. P. Kaplan, Z. I. Letina and A. D. Petrov</u> . . . . .	1405	1243
5. The Organometal Synthesis of Dibiphenylalkanes and Their Hydrogenation. <u>A. D. Petrov, E. P. Kaplan and Z. I. Letina</u> . . . . .	1409	1246
6. Direct Synthesis of Alkylpolysilane Chlorides. <u>A. D. Petrov, S. I. Sadykhzade, E. A. Chernyshev and V. F. Mironov</u> . . . . .	1413	1248
7. Direct Synthesis of Silane Chlorides from Dichlorides of the Vinylallyl Type. <u>A. D. Petrov, S. I. Sadykhzade, N. P. Smetankina and Yu. P. Egorov</u> . . . . .	1419	1255
8. Study of Sodium Tantalate Hydrates. <u>Vikt. I. Spitsyn and N. N. Shavrova</u> . . . . .	1425	1258
9. Mechanism for the Reaction of Tantalum Pentoxide with Sodium Hydroxide. <u>Vikt. I. Spitsyn and N. N. Shavrova</u> . . . . .	1429	1262
10. Reaction of Sodium and Potassium Metatitanates with Salts in Melts. <u>M. L. Sholokhov and G. V. Barkova</u> . . . . .	1433	1266
11. Potentiometric Study of Chlorite Solutions. <u>E. I. Flis and T. M. Vasilyeva</u> . . . . .	1439	1272
12. Thermographic Study of Chromium Sulfate. <u>I. D. Muzyka and O. I. Shor</u> . . . . .	1445	1277
13. Heterogeneous Equilibria in Aqueous Ternary Systems of Beryllium Chloride with the Chlorides of First Group Metals. <u>V. P. Blidin</u> . . . . .	1449	1281
14. Viscosity, Density and Molecular Bond Energies of Some Binary Systems. <u>A. P. Toropov</u> . . . . .	1453	1285
15. Irreversible-Reciprocal System of Sodium and Cadmium Chlorides and Iodides. <u>I. I. Ilyasov and A. G. Bergman</u> . . . . .	1457	1288
16. Thermochemical Study of Aqueous Solutions of Electrolytes. IV. Thermochemistry of Aqueous Ammonium Chloride Solutions. <u>K. P. Mishchenko and A. M. Ponomareva</u> . . . . .	1465	1296
17. Decomposition Rate of Potassium Persulfate in Hydrocarbon Emulsions. <u>A. I. Yurzhenko and O. P. Brazhnikova</u> . . . . .	1481	1311
18. Physicochemical Analysis of Binary Systems Formed by Acetamide with Organic Acids. I. Density, Viscosity, and Electrical Conductivity of the System Acetamide-Acetic Acid. <u>I. M. Bokhovkin and Yu. I. Bokhovkina</u> . . . . .	1485	1315
19. Physicochemical Analysis of Binary Systems Formed by Acetamide with Organic Acids. II. Density, Viscosity and Electrical Conductivity of the System Acetamide-Monochloroacetic Acid. <u>Yu. I. Bokhovkina and I. M. Bokhovkin</u> . . . . .	1489	1318

# TABLE OF CONTENTS (continued)

	Page	Russ. Page
20. Investigation of the Reaction of Acetamide with Some Aromatic Acids by the Methods of Physicochemical Analysis. <u>Z. K. Dzhelomanova, N. Z. Rudenko and D. E. Dionisyev</u> . . . . .	1493	1322
21. Physicochemical Analysis of the Reaction of Amines with Acids. III. Thermal Analysis of the Ternary System Urea-Formic Acid-Water. <u>M. N. Kuznetsova and A. G. Bergman</u> . . . . .	1497	1326
22. Physicochemical Analysis of the Reaction of Amines with Acids. IV. Thermal Analysis of the Ternary System Urea-Water-Butyric Acid. <u>M. N. Kuznetsova and A. G. Bergman</u> . . . . .	1505	1335
23. Dielectric Properties of Solutions of Aluminum Bromide in Some Organic Substances. <u>I. A. Sheka</u> . . . . .	1511	1340
24. Investigation of the Viscosity, Density and Electrical Conductivity of the System Quinoline-Acetic Acid. <u>S. P. Miskidzhyan and S. S. Kirilyuk</u> . . . . .	1521	1350
25. Complex Vanadyl Compounds. II. Citrate Complexes. <u>V. L. Zolotavin and N. N. Kalugina</u> . . . . .	1527	1355
26. Complex Compounds of Phosphorus Pentachloride with Chlorides of Some Elements. IV. The System Phosphorus Pentachloride-Tin Chloride. <u>Ya. B. Buryanov</u> . . . . .	1535	1363
27. Oxides of Transition Metals as Catalysts of the Oxidation of Hydrocarbons. <u>L. Ya. Margolis, S. Z. Roginsky and T. A. Gracheva</u> . . . . .	1541	1368
28. Physicochemical Investigation of Dioxane-Containing Systems. X. Some Physicochemical Properties of Dioxane Solutions of Pyrosulfuric Acid. <u>Ya. F. Mezheny</u> . . . . .	1545	1371
29. Alkylation of Benzene with Polyhalogenated Derivatives in Presence of Metallic Aluminum. <u>K. I. Porshakova, N. G. Sidorova and I. P. Tsukervanik</u> . . . . .	1549	1375
30. Reaction of Organic Bases with Metallic Salts. IV. Reaction of Antipyrine with Thiocyanates of Zinc and Cadmium. <u>S. E. Burkat</u> . . . . .	1553	1379
31. Hydrogenation of Solutions of Butadiene Rubber at Atmospheric Pressure and Room Temperature. I. Preparation of Rubbers of Different Degrees of Hydrogenation and Study of Their Properties. <u>A. I. Yakubchik and G. N. Gromova</u> . . . . .	1557	1381
32. The Irreversible Catalytic Conversion of Dipentene Over Skeletal Nickel in the Liquid Phase. <u>G. L. Dranishnikov</u> . . . . .	1565	1390
33. The Increasing Complexity of the Carbon Skeleton of Molecules in the Action of Iodides on Halogenated Organic Compounds. <u>B. V. Tronov and V. M. Aksenenko</u> . . . . .	1569	1393
34. Unsaturated Cyclic Hydrocarbons and Their Derivatives. XIX. Synthesis of 1,2,3-Tribromocyclohexane and Its Reaction with Quinoline. <u>N. A. Donnin and M. A. Larionova</u> . . . . .	1575	1398
35. The Liebermann Nitroso Group Reaction. <u>G. Ya. Vanag and E. Ya. Lukevits</u> . . . . .	1579	1400
36. Cleavage of Tri-p-tolylantimony and Tri- $\alpha$ -naphthylantimony by Acid Chlorides and Alkyl Halides in Presence of Aluminum Chloride. <u>M. S. Malinovsky and S. P. Olifirenko</u> . . . . .	1581	1402
37. Compounds Containing a Three-Membered Oxide Ring. XVI. Reaction of Ammonia with Esters of Glycidic Acids. <u>V. F. Martynov, Zh. D. Vasyutina and L. P. Nikulina</u> . . . . .	1585	1405

## TABLE OF CONTENTS (continued)

	Page	Russ. Page
38. Halogenation of Aromatic Silanes. II. Preparation and Properties of Chloro Derivatives of Diphenyldichlorosilane. <u>A. Ya. Yakubovich and G. V. Motaarev.</u>	1593	1413
39. The Anomalous Reaction of $\alpha$ -Haloketones with Esters of Phosphorous Acid. II. Reaction of Chloro- and Bromoacetone with Esters of Phosphorous and Phenylphosphinous Acids. <u>A. N. Pudovik and V. P. Averyanova</u> . . . . .	1605	1426
40. The Anomalous Reaction of $\alpha$ -Haloketones with Esters of Phosphorous Acid. III. The Reaction of $\alpha, \alpha$ - and $\alpha, \gamma$ -Dihaloketones with Triethyl Phosphite. <u>A. N. Pudovik and L. G. Salekhova</u> . . . . .	1611	1431
41. Investigations on Derivatives of Alkylphosphinous and Dialkylphosphinic Acids. III. The Atomic Refraction of Phosphorus in Esters of Alkylphosphinous Acids. <u>A. Razumov and O. Mukhacheva.</u> . . . . .	1615	1436
42. Preparation of Some Alkyl- $\beta$ -hydroxyethylphosphorous Acids. <u>E. L. Gefter</u> . . . . .	1619	1440
43. The Structure of the Product of Reaction of Aniline with Propargyl Aldehyde. <u>I. Ya. Postovsky, R. O. Matevosyan and Yu. N. Sheinker</u> . . . . .	1623	1443
44. Investigations on Quinones. X. Reaction of Acetylacetoneimine with p-Quinone. <u>A. N. Grinev, V. I. Shvedov and A. P. Terentyev</u> . . . . .	1629	1449
45. Investigations on Quinones. XI. Synthesis of Substituted Indoles. <u>A. N. Grinev, V. I. Shvedov and A. P. Terentyev</u> . . . . .	1633	1452
46. Synthesis and Investigation of Nitro- and Sulfo- Derivatives of 3,4-Dimethyl-3,4-diphenylhexane. <u>A. M. Khaletsky and A. N. Rudakova</u> . . . . .	1635	1453
47. The Rate of Transformation of 2-Keto-L-gulonic Acid and Its Methyl Ester Into L-Ascorbic Acid in an Aqueous Medium. <u>V. I. Veksler and G. E. Shaltyko</u> . . . . .	1639	1456
48. Cyclic Acetals. I. Condensation of Styrene and Its Homologs with Aldehydes in Presence of Hydrochloric Acid and Reaction of 4-Phenyl-1,3-dioxane with $\text{SOCl}_2$ , $\text{PCl}_5$ and Fatty Acids. <u>N. V. Shorygina.</u> . . . . .	1643	1460
49. The Structure and Properties of Cellulose. LVI. Investigation of the Relative Reactivity of the Hydroxyl Groups of Cellulose. The Distribution of Methoxyl Groups in Partially Methylated Cellulose Prepared in an Alkaline Medium. <u>V. Derevitskaya, Yu. Kozlova and Z. Rogovin</u> . . . . .	1649	1466
50. Synthesis of Some Physiologically Active Esters of Dialkylaminoacetic Acids. <u>A. L. Remizov and N. V. Khromov-Borisov</u> . . . . .	1655	1471
51. Synthesis of Polycyclic Compounds Related to the Steroids. XXXV. Condensation of Cyclic Allyl Halo- Derivatives with Cyclic 2-Methyl-1,3-diketones and Intramolecular Cyclization of the Resultant Compounds to Ketones Containing the Hydrogenated Skeleton of Phenanthrene, Chrysene and Cyclopentanophenanthrene with an Angular Methyl Group. <u>I. N. Nazarov, G. P. Berkholetova, S. N. Ananchenko, I. V. Torgov and G. V. Aleksandrova</u> . . . . .	1667	1482
52. Heterocyclic Compounds. 38. Synthetic Spasmolytics. Preparation of 4-Aminopiperidines by Reductive Amination of 4-Piperidones. <u>I. N. Nazarov and E. T. Golovin.</u> . . . . .	1679	1496
53. The Structure of Gramicidin C. III. Study of Some Products of Hydrolysis of Gramicidin C. <u>N. A. Poddubnaya and M. I. Kiselev</u> . . . . .	1691	1508



# TABLE OF CONTENTS (continued)

	Page	Russ. Page
54. Discussion Concerning a Paper by N. R1 and G. Orgman. <u>A. Bundel</u> . . . . .	1697	1512
55. To the Memory of M. V. Likhosherstov. <u>A. A. Petrov</u> . . . . .	1701	1515

June, 1956

## TABLE OF CONTENTS

	Page	Russ. Page
1. The System Strontium-Bismuth. <u>S. A. Shchukarev, M. P. Morozova, Kan Kho-Yn and G. V. Kokosh</u> .....	1705	1525
2. Study of the Exchange Reactions of Iodine in Systems Containing Iodine Chloride by the Method of Labeled Atoms. <u>V. L. Pavlov and Yu. Ya. Flalkov</u> .....	1711	1531
3. Hypotrifluoric Acid. <u>V. L. Pavlov and Yu. Ya. Flalkov</u> .....	1715	1534
4. The Problem of the Anodic Precipitates Obtained During the Electrolysis of Silver Salts. II. <u>M. S. Skanavi-Grigoryeva and I. L. Shimanovich</u> .....	1721	1540
5. Influence of Various Elements on the Solubility of Carbon in Molten Iron. <u>N. A. Vatolin and O. A. Esin</u> .....	1725	1543
6. The Solubility of Perchlorates of Elements of the Second Group of the Periodic System. <u>L. S. Lilich and B. F. Dzhurinsky</u> .....	1733	1549
7. Interaction of Lithium Titanate with Other Salts in Melts. <u>L. N. Belyaev and N. P. Sigida</u> .....	1739	1553
8. The Solubility Product of Beryllium Hydroxide. <u>L. M. Korenman, F. S. Frum and G. A. Tsygankova</u> .....	1745	1558
9. The Reciprocal System with Layering of the Chlorides and Tungstates of Lithium and Silver. <u>D. S. Lesnykh and A. G. Bergman</u> .....	1749	1560
10. Electrical Conductivity and Viscosity of Solutions of Aluminum Chloride in Nitromethane. <u>V. S. Galinker</u> .....	1753	1564
11. Investigation of the Reaction of Phenylhydrazine with Chlorophenols by the Method of Physicochemical Analysis. <u>F. T. Pozharsky and D. E. Dionisyev</u> .....	1757	1568
12. The Influence of Specific Adsorption on the Half-Wave Potential During Reduction of Complex Compounds. <u>E. A. Maksimyuk and G. S. Ginzburg</u> .....	1763	1572
13. The Composition of Complex Compounds of Cobalt with Dimethylglyoxime formed in Presence of $\text{Na}_2\text{SnO}_3$ . <u>L. S. Nadezhina and P. N. Kovalenko</u> .....	1771	1579
14. The Thermal Stability of Paraffinic Hydrocarbons. <u>B. G. Gavrilov and L. S. Bagratian</u> .....	1777	1586
15. Conjugated Systems. LXII. The Condensation of Dienic Hydrocarbons with Propiolic Acid and Its Methyl Ester. <u>A. A. Petrov and K. B. Rall</u> .....	1779	1588
16. Conjugated Systems. LXIII. The Action of Benzenesulfodichloramide on Alcoholic Solutions of Piperylene. <u>T. A. Zyryanova and A. A. Petrov</u> .....	1785	1593
17. Preparation of Hydroaromatic Compounds on the Basis of Products of the Diene Synthesis. IV. The Action of Organomagnesium Compounds on Esters of Cyclohexene-4-Dicarboxylic Acids. <u>N. P. Sopov</u> .....	1795	1602
18. Transformations of Pinacones Containing Substituted Acetylenic Residues. XI. Action of Mercuric Chloride and Bromide on Unsymm. Dimethyl-Phenyl-Phenylethynyl-Ethylene Glycol. <u>E. D. Venus-Danilova and A. Fabritsy</u> .....	1803	1609

## TABLE OF CONTENTS (continued)

	Page	Russ. Page
19. Unsaturated Cyclic Hydrocarbons and Their Derivatives. XX. Transformation of Methylcyclohexenes and Methylcyclohexadienes into Dinitrotoluenes Under the Action of Nitrating Mixture. <u>N. A. Domnin and V. A. Cherkasova</u> . . . . .	1811	1616
20. Unsaturated Cyclic Hydrocarbons and Their Derivatives. XXI. The Reaction of 1-Methyl-3,4-Dibromocyclohexane with Quinoline. <u>N. A. Domnin and V. A. Cherkasova</u> . . . . .	1813	1618
21. The Chlorination of Dichlorohexadiene and the Dehydrochlorination of the Reaction Products. <u>A. E. Akopyan, Zh. A. Kosoyan and V. V. Vardanyan</u> . . . . .	1817	1621
22. Hydrogenation of Solutions of Butadiene Rubber at Atmospheric Pressure and Room Temperature. II. Influence of Nature of the Solvent on the Process of Catalytic Hydrogenation of Unsaturated Compounds over Palladium-on-Calcium Carbonate Catalyst. <u>A. I. Yakubchik and G. N. Gromova</u> . . . . .	1823	1626
23. The Chemical Structure of the Autopolymer of Butadiene. <u>A. I. Yakubchik and A. I. Spasskova</u> . . . . .	1826	1629
24. Addition of $\alpha$ -Haloethers to Isoprene. <u>A. N. Pudovik and N. Altunina</u> . . . . .	1833	1635
25. Investigation of the Mobility of the Tertiary Butyl Group in Derivatives of Tert.-Butylbenzene by the Method of Isotopic Exchange. <u>L. M. Nazarova</u> . . . . .	1837	1640
26. The Catalyzed Vapor-Phase Hydrolysis of Halo Derivatives of Organic Compounds. I. Hydrolysis of 1,2,4-Trichlorobenzene. <u>A. I. Naumov and Z. G. Lapteva</u> . . . . .	1845	1647
27. Synthesis of Chloro- and Bromo-Substituted Methylstyrenes. <u>A. F. Dokukina, M. M. Koton, O. K. Mineeva and V. A. Paribok</u> . . . . .	1849	1651
28. The Condensation of Styrene with Benzene. <u>I. P. Tsukervanik and T. G. Garkovets</u> . . . . .	1853	1653
29. Condensation of Dimethylaniline with Acetylene and Acetaldehyde. <u>T. G. Garkovets and I. P. Tsukervanik</u> . . . . .	1857	1656
30. Synthesis of 1,4-Diaminobutanone-2. <u>I. K. Korobitsyna, Yu. K. Yuryev and S. N. Shvedova</u> . . . . .	1861	1660
31. II. The Catalytic Transformation of n-Butyl Alcohol Under Pressure. <u>B. A. Bolotov and L. K. Smirnova</u> . . . . .	1865	1662
32. The Isomerization of Monodeuteronaphthalenes. <u>A. Korolev, A. Shatenshtein, E. Yurygina, V. Kalinachenko and P. Alikhanov</u> . . . . .	1869	1666
33. A New Method of Synthesis of Esters of Phosphinic And Thiophosphinic Acids. XXV. Addition of Mixed Dialkylphosphorous and Dialkylthiophosphorous Acids and of Diallylphosphorous Acid to Unsaturated Compounds. <u>A. N. Pudovik and N. I. Khlopina</u> . . . . .	1877	1672
34. Synthesis of Acyl Derivatives of O,O-Dialkylthiophosphates. <u>N. I. Zemlyansky and M. S. Malinovsky</u> . . . . .	1881	1677
35. The Polymerization of $\alpha$ -Methylvinyl Alkyl Ethers. III. Polymerization of $\alpha$ -Methylvinyl Propyl and Butyl Ethers. <u>M. F. Shostakovsky and E. P. Gracheva</u> . . . . .	1883	1679
36. Free Radical Reactions of Lead Tetraacetate. <u>G. A. Razuvaev, Yu. A. Oldekop, Yu. A. Sorokin and V. M. Tverdova</u> . . . . .	1887	1683

## TABLE OF CONTENTS (continued)

	Page	Russ. Page
37. The Catalytic Decomposition of Phenylmercury Hydroxide in Solvents. <u>G. A. Razuvaev, G. G. Petukhov and R. V. Kalina</u> .....	1889	1685
38. Transformation of Tetraethylsilane on Chromium Catalyst. <u>B. N. Dolgov, G. V. Golodnikov and N. E. Glushkova</u> .....	1893	1688
39. Heterofunctional Condensation of Organoethoxy- and Organochlorosilanes. <u>K. A. Andrianov, T. N. Ganina and N. N. Sokolov</u> .....	1897	1691
40. Oxidative and Oxidative-Hydrolytic Transformations of Organic Molecules. XXV. The Hydrolytic and Oxidative-Hydrolytic Cleavage of 2-Phenyl- and 2-Benzyl-3-Hydroxy-1,4-Naphthoquinones. <u>L. A. Shchukina and E. P. Semkin</u> .....	1901	1695
41. Oxidative and Oxidative-Hydrolytic Transformations of Organic Molecules. XXVI. Preparation of Triketocarboxylic Acids Under the Conditions of the Hooker Reaction. <u>L. A. Shchukina</u> .....	1907	1701
42. Oxidative and Oxidative-Hydrolytic Transformations of Organic Molecules. XXVII. Tautomeric Transformations and Properties of Hydroxy- and Chloroketocarboxylic Acids. <u>L. A. Shchukina and M. M. Shemyakin</u> .....	1915	1708
43. Synthesis and Properties of Benzimidazole Derivatives. III. The Reaction of 1,2,4-Triaminobenzene with Carboxylic Acids. <u>G. M. Kharkharova</u> .....	1921	1713
44. Reactions of Hydrazine Derivatives. V. Synthesis of 3,5,5-Trialkylpyrazolines. <u>A. N. Kost and I. I. Grandberg</u> .....	1925	1717
45. Reduction with Formic Acid and Its Derivatives. V. The Reduction of Quinolium Salts. <u>A. N. Kost and L. G. Yudin</u> .....	1929	1720
46. Imidazole Series. IV. Reaction of Sulfuric Acid with 2- $\beta$ -Ketoalkyl(Aryl)-Mercaptoimidazoles. <u>P. M. Kochergin and M. N. Shchukina</u> .....	1933	1723
47. Preparation of 4-Methyluracil Based on Diketene. <u>N. V. Khromov-Borisov and R. S. Karlinskaya</u> .....	1939	1728
48. Absorption Spectra of Triphenylamine and Its p-Nitro Derivatives in Pure Alcohol Solution and in the Presence of Sodium Alcoholate. I. <u>P. M. Bugai</u> .....	1941	1729
49. Preparation of 6-Monohalomethylquinolines. <u>B. P. Lugovkin</u> .....	1945	1733
50. The Synthesis of Aromatic Isocyanates. <u>D. F. Kutepov and N. S. Rozanova</u> .....	1949	1737
51. Heterocyclic N-Oxides. III. Polarographic Reduction of Some Heterocyclic N-Oxides. <u>L. V. Varyukhina and Z. V. Pushkareva</u> .....	1953	1740
52. Cyclization of 2,2-Diindanyonyl-1-Acenaphthenone. <u>G. Ya. Vanag and L. S. Geita</u> .....	1959	1746
53. Reaction of Hydrazine Hydrate with 2-Nitro-1,3-Indandione. <u>G. Ya. Vanag and M. A. Matskanova</u> .....	1963	1749
54. Naphthalene Series. XIV. The Light Sensitivity of Aromatic Selenium-Containing Nitro Compounds. 1-Nitronaphthalene-8-Seleninic Acid. <u>V. V. Kozlov</u> .....	1969	1755
55. Catalytic Reduction of Aromatic Nitro Compounds. VI. The Influence of Some Functional Groups on the Reduction Kinetics of the Nitro Group on Skeletal Nickel. <u>V. P. Shmonina and D. V. Sokolsky</u> .....	1973	1759

# TABLE OF CONTENTS (continued)

	Page	Russ. Page.
56. Exomolecular Reactions and Color. VI. Study of the Absorption Spectra of Molecular Complexes of 1,3-Dinitrobenzene and 2,4-Dinitrostilbene with Dimethylaminostilbene. <u>V. A. Izmailsky, A. N. Guseva and E. S. Solovyeva</u> . . . . .	1979	1766
57. Structure of Gramicidin S. IV. Further Studies of Its Copper Complexes. <u>N. A. Poddubnaya, N. I. Gavrilo and M. I. Kiselev</u> . . . . .	1991	1779
58. Corelborin P. <u>M. Ya. Tropp</u> . . . . .	1999	1786
59. Fritillaria Alkaloids. II. The Chlorination Products of Raddeanine. <u>Kh. A. Aslanov and A. S. Sadykov</u> . . . . .	2003	1790
60. Fritillaria Alkaloids. III. The Structure of Raddeanine. <u>Kh. A. Aslanov and A. S. Sadykov</u> . . . . .	2007	1794
61. Delphinium Alkaloids. VII. Delphonine. <u>N. K. Abubakirov and S. Yu. Yunusov</u> . . .	2011	1798
62. Letter to the Editor. <u>L. K. Mushkalo</u> . . . . .	2021	1809

July, 1956

## TABLE OF CONTENTS

	Page	Russ. Page
1. The Enthalpy of Formation of Arsine. <u>S. M. Ariya, M. P. Morozova, and Knuan Tszl-tao</u> . . . . .	2023	1813
2. Study of the Interaction of Sulfates and Molybdates of Lithium and Silver in Melts, <u>I. N. Belyaev and S. S. Doroshenko</u> . . . . .	2027	1816
3. Study of the Mechanism of Distribution of Isomorphous Components on Crystallization from Aqueous Solutions Using Radioactive Indicators. I. Study of the Equilibrium in the System Copperammonium Sulfate-Zincammonium Sulfate-Water at 20° in Presence of the Radioactive Isotopes $Zn^{65}$ and $Cu^{64}$ . <u>G. I. Gorshtein and N. I. Silantjeva</u> . . . . .	2033	1821
4. Study of the System $(NH_4)_2BeF_6-NH_4MnF_6-H_2O$ . <u>L. R. Batsanova and A. V. Novoselova</u> . . . . .	2039	1827
5. Study of the Metastable Equilibria Between Liquid Phases. V. <u>I. L. Krupatkin</u> . . . . .	2043	1831
6. Physicochemical Study of Thiocyanate Complexes of Silver. <u>A. M. Golub</u> . . . . .	2049	1837
7. The Role of pH in the Formation and Extraction of Internal Complex Compounds. <u>I. M. Korenman and F. R. Sheyanova</u> . . . . .	2061	1849
8. Polarographic Study of the Kinetics of Polymerization Processes. <u>M. I. Bobrova and A. N. Matveeva</u> . . . . .	2071	1857
9. Study of the Sorption Exchange of Organic Ions. <u>A. T. Davydov and R. F. Skoblionok</u> . . . . .	2075	1860
10. Complex Formation of Acetamide and Benzamide with Other Organic Compounds. <u>N. D. Strelnikova</u> . . . . .	2079	1863
11. Study of Interaction of Acetamide with Phenols by Physicochemical Methods of Analysis. <u>Z. K. Dzheleomanova, N. Z. Rudenko, and D. E. Dionisyev</u> . . . . .	2083	1866
12. Physicochemical Analysis of Binary Systems Formed by Acetamide with Organic Acids. III. Density, Viscosity and Electrical Conductivity of the System Acetamide-Tri-chloroacetic Acid. <u>Yu. I. Bokhovkina and I. M. Bokhovkin</u> . . . . .	2089	1872
13. The Reaction of Potassium Fluoborate with Styrylmagnesium and Phenylacetylenyl-magnesium Bromides. <u>V. A. Sazonova and N. Ya. Kronrod</u> . . . . .	2093	1876
14. Oxonium Compounds of Complex Ethers with Organic Acids. III. The Systems $HCOOC_2H_5-CH_3COOH$ and $CCl_3COOC_2H_5-CH_3COOH$ . <u>M. Usanovich, K. Bilyalov, and L. Krasnomolova</u> . . . . .	2099	1881
15. Synthesis of Hydrocarbons. LVI. Conversion of Hydroaromatic Ketones into Aromatic Hydrocarbons by Phosphorus Pentoxide. <u>R. Ya. Levina, Kim Dyal Gir, and V. R. Skvarchenko</u> . . . . .	2103	1884
16. The Problem of Experimental Proof of the Baker-Nathan Effect. <u>M. I. Batuev</u> . . . . .	2107	1888
17. Investigation in the Field of Cyclic Acetals of Hydroxycarbonyl Compounds. VII. Preparation and Properties of Epoxyoctenol Methyl Lactolide ( $\alpha$ -Methoxy- $\alpha$ -Tert-Butyl- $\beta,\beta$ -Dimethylethylene Oxide). <u>T. I. Temnikova and S. S. Skorokhodov</u> . . . . .	2115	1897



# TABLE OF CONTENTS (continued)

	Page	Russ. Page
18. Investigation of the Reaction of Pinacols Containing Substituted Acetylene Residues. XII. The Action of Mercuric Acetate on Unsymmetrical Dimethylphenylphenyl-acetylenyl-Ethyleneglycol. <u>E. D. Venus-Danilova and A. Fabritsy</u> . . . . .	2119	1901
19. The Reaction of Divinyl Oxide with Amines. <u>A. A. Petrov and V. M. Albitskaya</u> . . . . .	2125	1907
20. Hypochlorination of Piperylene. <u>A. N. Pudovik and B. E. Ivanov</u> . . . . .	2129	1910
21. Condensation of Diene Hydrocarbons with Acetylenedicarboxylic Acid and Its Methyl Ester. <u>N. P. Sopov and V. S. Miklashevskaya</u> . . . . .	2133	1914
22. Investigation in the Field of Conjugated Systems. LXIV. The Action of Benzosulfo-dibromoamide on Solutions of Piperylene in Methyl and Ethyl Alcohols. <u>T. A. Zyryanova and A. A. Petrov</u> . . . . .	2137	1918
23. Investigation in the Field of Conjugated Systems. LXV. Hydrogenation of Vinylalkyl-acetylenes in the Presence of Colloidal Palladium. <u>Kh. V. Balyan, A. A. Petrov, and Yu. I. Porfiryeva</u> . . . . .	2145	1926
24. Catalytic Alkylation of Chlorobenzene by Propyl Alcohols. <u>M. B. Turova-Polyak, N. V. Danilova and N. V. Kuklina</u> . . . . .	2155	1936
25. Oxidation and Oxidative-Hydrolysis of Organic Molecules. XXVIII. Oxidative-Hydrolysis of Nitrosubstituted Hydroxyazo Dyes. <u>O. M. Shemyakina, B. M. Bogoslovsky, and M. M. Shemyakin</u> . . . . .	2161	1940
26. Quaternary Ammonium Compounds. II. The Formation of Tetrollic Acid by Reaction of Trimethyl-(2, 2, 3, 3-Tetrachlorobutyl)-Ammonium Iodide with Aqueous Alkali. <u>A. T. Babayan and A. A. Grigoryan</u> . . . . .	2167	1945
27. Mechanism of Guanidine Nitrate Formation by Ammoniolysis of Cyanoguanidine. <u>S. N. Kazamovsky and N. I. Moshchanskaya</u> . . . . .	2171	1948
28. Investigation in the Field of Tautomeric Compounds. XXII. The Lability of Hydrogen Atoms of the Quinaldine Methyl Group. <u>A. E. Porai-Koshits and L. I. Chizhevskaya</u> . . . . .	2175	1950
29. Synthesis of Propionic Acid-1-C <sup>14</sup> Via an Organolithium Compound. <u>N. F. Novotorov and I. A. Korshunov</u> . . . . .	2183	1959
30. Compounds Labeled with C <sup>14</sup> and N <sup>15</sup> . IV. Synthesis of "Key" Compounds. <u>V. I. Maimind, B. V. Tokarev, E. Gomes, R. G. Vdovina, K. M. Ermolaev, and M. M. Shemyakin</u> . . . . .	2187	1962
31. Aliphatic-Aromatic Aminoalcohols. I. Synthesis of $\alpha$ -(m-Aminophenyl)- $\beta$ -Alkylamino-ethanols. <u>S. I. Sergievskaya and L. E. Svetsitskaya</u> . . . . .	2193	1967
32. Reactions of Hydrazine Derivatives. VI. The Action of Alkyl Halides on Acetone Azine. <u>A. N. Kost, G. A. Golubeva, and I. I. Grandberg</u> . . . . .	2201	1976
33. The Change of the Chemical Heterogeneity of Cellulose Xanthate During the Ripening of Viscose. <u>A. T. Serkov, A. B. Pakshver and E. M. Mogilevsky</u> . . . . .	2205	1979
34. The Chain Reaction of Carbon Tetrachloride with Isopropyl Alcohol Initiated by Acetylated and Benzoylated Hydroperoxides of 1-Hydroxycyclohexanone. <u>G. A. Kolpovskaya, B. N. Moryganov, G. A. Razuvaev, and V. A. Shushunov</u> . . . . .	2209	1981

# TABLE OF CONTENTS (continued)

	Page	Russ. Page
35. Reactions of Acetyl Benzoyl Peroxide with Alcohols and Acetic Acid. <u>G. A. Razuvaev and V. N. Latyaeva</u> . . . . .	2213	1986
36. Syntheses with the Help of Acrylonitrile. XXVIII. $\gamma$ -Benzoylcaproic Acid and Its Derivatives. <u>A. N. Kost and A. P. Terentyev</u> . . . . .	2219	1992
37. Synthesis of Some Halo Derivatives of Benzophenone. <u>B. V. Tronov and E. S. Novikova</u> . . . . .	2221	1994
38. The Sulfonation of 2-Chloronaphthalene. I. Sulfonation at Low Temperature. <u>N. N. Vorozhtsov, jun., and N. N. Karandasheva</u> . . . . .	2225	1997
39. The Sulfonation Reaction. XXXIX. The Hydrolysis and Isomerization of Naphthalene Trisulfonic Acids. <u>B. I. Karavaev and A. A. Spryskov</u> . . . . .	2231	2002
40. Sulfonic Acids of Sulfones as By-Products of Sulfonation Reactions. II. The Behavior of the Disulfonic Acid or Diphenylsulfone Under Conditions of Alkaline Fusion of Benzene-m-Disulfonic Acid. <u>A. P. Shestov and N. A. Ostrova</u> . . . . .	2235	2005
41. Trichlorophosphazotrichloroacetyl and the Acid Chloride of the N-Phosphoric Acid of Trichloriminoacetyl Chloride. <u>A. V. Kirsanov and G. I. Derkach</u> . . . . .	2239	2009
42. The Mechanism of the Arbuzov Rearrangement. III. Reaction of the Nitrile and Methyl Ester of $\alpha,\beta$ -Dibromo- and $\alpha,\beta$ -Dichloropropionic Acid Phosphites. <u>V. S. Abramov and N. A. Ilyina</u> . . . . .	2245	2014
43. Azomethine Dyes from Oxindole Derivatives. II. <u>M. S. Kisteneva</u> . . . . .	2251	2019
44. The Tautomerism of $\alpha$ -Pyridone and Carbostyryl. <u>M. I. Kabachnik, S. T. Ioffe, and Yu. N. Sheinker</u> . . . . .	2257	2025
45. The Structure of Gramicidin S. V. Two Forms of Gramicidin, Their Mutual Transformations and Structure. <u>N. I. Gavrilov, N. A. Poddubnaya, L. N. Akimova, and E. M. Grigoryeva</u> . . . . .	2261	2029
46. Isolation of a New Antibiotic Longisporine and Study of Its Chemical Nature. <u>G. P. Menshikov and M. M. Rubinshtein</u> . . . . .	2267	2035
47. Synthesis of 3-Vinylpiperidine. <u>L. N. Yakhontov and M. V. Rubtsov</u> . . . . .	2271	2040
48. Some $\beta$ -Chloroethyl and Ethylenimine Derivatives of Pyridine. <u>B. M. Mikhailov and T. K. Kozminskaya</u> . . . . .	2275	2042
49. Reaction of Acylsulfanilyl Chlorides with 2-Aminothiazole. I. Reaction of Di-(Carbomethoxysulfanilyl)-Aminothiazole with 2-Aminothiazole. <u>B. G. Yasnitsky and E. B. Dolberg</u> . . . . .	2279	2046
50. Chemistry of Heterocycles. XXV. Synthesis of 9-Phenylacridine from Acyl Derivatives of 2-Aminotriphenylcarbinol. <u>P. A. Petyunin, N. G. Panferova, and M. E. Konshin</u> . . . . .	2283	2050
51. The Structure of Thiazole Disulfamides. <u>I. Ya. Postovsky and V. V. Kushkin</u> . . . . .	2287	2052
52. 3,4-Diketones of the Furanidine Series of the Bispyran Type in the Synthesis of Condensed Heterocyclic Systems. <u>I. K. Korobitsyna, Yu. K. Yuryev, Yu. A. Cheburkov and E. M. Lukina</u> . . . . .	2293	2058
53. Aconite Alkaloids. VIII. Identity of Delphelatine with Eldeline. <u>A. D. Kuzovkov</u> . . . . .	2299	2063

## TABLE OF CONTENTS (continued)

	<u>Page</u>	<u>Russ. Page</u>
54. Study of $C_{18}$ Alkaloids. I. Sophocarpinols. <u>A. S. Sadykov, O. S. Otroshchenko, and Yu. K. Kushmuradov</u> .....	2303	2066
55. Alkaloids of the Branchy Plantain ( <i>Plantago Ramosa</i> , Syn. <i>P. Indica</i> ). II. <u>A. V. Danilova</u> .....	2307	2069
56. 1,2-Naphtho-(3',4')-Puroxan Series. VI. The Bisulfite Compound of 6-Nitro-1,2-Naphtho-(3',4')-Puroxan and Its Derivatives. <u>S. V. Bogdanov and N. I. Zilberman</u> .	2311	2071
57. Fatty Aromatic Amino Alcohols. II. $\alpha$ -(p-Aminophenyl)- $\beta$ -Alkylaminoethanols. <u>S. I. Sergievskaya and L. E. Svetsitskaya</u> .....	2317	2077
Discussion		
58. The Nomenclature of Compounds Obtained by Treating Carboxylic Acid Amides with Phosphorus Pentachloride. <u>A. V. Kirsanov</u> .....	2323	2082
59. On the Problem of Stepwise Complex Formation. <u>K. B. Yatsimirsky</u> .....	2325	2083
60. Further Discussion on the Polarographic Determination of the Composition and Stability of Complex Ions in Solution in Stepwise Complex Formation. <u>Ya. L. Turyan</u> .....	2327	2084
61. From the Commission on Nomenclature of Chemical Compounds of the Chemical Sciences Division of the Academy of Sciences of the USSR. ....	2331	2086

August, 1956

## TABLE OF CONTENTS

	Page	Russ. Page
1. Study of Molybdenum Halides. I. Vapor Pressure and Dissociation Pressure of Molybdenum Pentachloride. <u>S. A. Shchukarev, I. V. Vasilkova and B. N. Sharupin</u> .....	2335	2093
2. Chemistry of Compounds of Variable Composition. II. Lattice Energy of Acids of Elements of Subsidiary Subgroups. <u>S. M. Ariya, E. Volf, G. Grossmann and M. P. Morozova</u> .....	2341	2097
3. Chemistry of Compounds of Variable Composition. III. Compounds of Variable Composition and the Periodic Law. <u>S. M. Ariya, E. Volf and G. Grossmann</u> .....	2347	2102
4. Principles of Transfer of Metals in a Voltage Series in Solvents with Low Dielectric Constants. <u>E. Ya. Gorenbein</u> .....	2351	2107
5. Determination of Solubility of Sparingly Soluble Compounds with the Aid of Anisotropic Radioactive Indicators. <u>I. M. Korenman, F. P. Sheyanova and M. A. Potapova</u> .....	2359	2114
6. A Diagonal Reciprocal System of Chlorides and Tungstates of Sodium and Potassium. <u>G. Bukhalova and E. Matelko</u> .....	2365	2119
7. The Stannic Chloride - Phenol System. <u>M. Usanovich and E. Pichugina</u> .....	2371	2125
8. Systems Formed by Stannic Chloride with Nitrobenzene and m-Dinitrobenzene. <u>M. Usanovich and E. Pichugina</u> .....	2377	2130
9. Solubilities in the System Potassium Chloride - Glucose - Water at 25°. <u>A. K. Zhdanov and K. G. Higai</u> .....	2383	2134
10. Comparative Study of Metal Complexes with Tartaric, Succinic and Dimethoxy-succinic Acids. <u>I. V. Pyatnitsky and S. M. Gendler</u> .....	2387	2137
11. Physicochemical Study of Aqueous Dioxan Solutions. IX. Aqueous Dioxan Solutions of Sulfuric Acid. <u>R. F. Mezhenyi</u> .....	2399	2149
12. Study of Redistribution of Hydrogen Between Hydrocarbons on Aluminosilicate Catalyst Using Carbon Isotope C <sup>14</sup> . <u>S. Z. Roginsky and T. I. Andrianova</u> .....	2403	2151
13. Study of the Manner of Hydrogen Transfer in Oxidation-Reduction Reactions. IX. Leikart Reaction. <u>A. F. Rekasheva and G. P. Miklukhin</u> .....	2407	2155
14. Oxidation of Alkadiene Hydrocarbons of Unsymmetrical Structure with Acetyl Peroxide. II. <u>V. I. Pansevich-Kolyada</u> .....	2413	2161
15. Reactions of Acetylenic $\gamma$ -Glycols. IV. Isomerization of Unsymm. Methyl-Di-p-Tolylbutindiol (1,1-Di-p-Tolylpentin-2-Diol-1,4). <u>E. D. Venus-Danilova and Z. V. Printseva</u> .....	2423	2170
16. Tertiary Triols of the Acetylene Series and Their Reactions. X. Potassium Permanganate Oxidation of the Ethylenic Triols: 2,3,6-Trimethylhepten-4-Triol-2,3,6; 3,4,7-Trimethylocten-5-triol-3,4,7; 2,5-Dimethyl-5-(1-Hydroxycyclohexyl)-Penten-3-Diol-2,5 and 2,4-Di-(1-Hydroxycyclohexyl)-Buten-3-ol-2. <u>V. I. Nikitin and I. M. Timofeeva</u> .....	2429	2175

## TABLE OF CONTENTS (continued)

	Page	Russ. page
17. Boron Fluoride as a Catalyst in Organic Chemistry. XII. Alkylation of Benzene by Pseudobutylene Using a $\text{BF}_3 \cdot \text{H}_3\text{PO}_4$ Catalyst. <u>S. V. Zavgorodny, L. S. Shvetsova and B. S. Khromykh</u> . . . . .	2435	2180
18. Catalytic Reactions with Metallic Aluminum. I. Alkylation of Benzene with Alkyl Bromides. <u>M. B. Turova-Polyak and M. A. Maslova</u> . . . . .	2441	2185
19. Investigations in the Field of Conjugated Systems. LXVI. The Action of Benzosulfodichloro- and Benzosulfodibromoamide on Alcohol Solutions of Isoprene. <u>T. A. Zyryanova and A. A. Petrov</u> . . . . .	2447	2189
20. Synthesis of Hydrocarbons. LVII. Partial Reduction of Hydrocarbon Dienes with Conjugated Double Bond Systems Using Sodium in Liquid Ammonia. <u>R. Ya. Levina, V. R. Skvarchenko, M. G. Kuzmin and E. G. Treshchova</u> . . . . .	2453	2195
21. Investigations in the Field of Unsaturated Cyclic Hydrocarbons and their Derivatives. XXII. The Problem of the Steric Structure of Bicyclo-(0,2,2)-Hexane. <u>N. A. Domnin</u> . . . . .	2459	2200
22. Reactions of Free Radicals in Solution. V. Destruction of Polymeric Molecules by Free Radicals. <u>S. E. Bresler, B. A. Dolgoplosk, V. A. Krol and S. Ya. Frenkel</u> . . . . .	2461	2201
23. The Interaction of Alkyl Iodides with Silver Salts of Phenylalkylarsinic Acids. <u>Gilm Kanai and I. M. Starshov</u> . . . . .	2469	2209
24. Diarylbromonium and Diarylchloronium Salts. <u>A. N. Nesmeyanov, N. V. Kruglova, R. B. Mamerikova and T. P. Tolstaya</u> . . . . .	2473	2211
25. Catalytic Synthesis of n-Butylamine on Mixed Oxide Catalysts. <u>F. V. Belchev and N. I. Shuikin</u> . . . . .	2479	2218
26. The Reaction Between Hexachloroethane and Isopropyl Alcohol Initiated by Benzoyl Peroxide. <u>G. A. Razuvaev, B. N. Moryganov and A. G. Kronman</u> . . . . .	2485	2224
27. The Reactivity of Alkali Salts of Acid Alkylthiophosphinic Esters. Alkylation and Acylation. <u>M. I. Kabachnik, T. A. Mastryukova, N. I. Kurochkin, N. P. Rodionova and E. M. Popov</u> . . . . .	2491	2228
28. Some Rules in the Series of Phosphorus-Containing Acids. <u>A. Razumov and Sim-Do-Khen</u> . . . . .	2497	2233
29. The Anomalous Reaction of $\alpha$ -Haloketones with Phosphorous Esters. IV. The Reaction of Phosphorous Esters with Mono- and Dichloroacetylacetone, Phosphonoacetone and Acetoacetic Ester. <u>A. N. Pudovik</u> . . . . .	2503	2238
30. Investigation of Copolymerization of Three-Component Systems. I. <u>S. M. Zhivukhin, M. V. Barkova and I. P. Losev</u> . . . . .	2509	2243
31. Investigation of Copolymerization of Three-Component Systems. II. Copolymerization of the Three-Component System Methyl Methacrylate - Acrylonitrile - Tetraallyl Orthosilicate. <u>S. M. Zhivukhin, M. V. Barkova and I. P. Losev</u> . . . . .	2513	2247
32. Investigation of Copolymerization of Three-Component Systems. III. Copolymerization of the System Methyl Methacrylate - Acrylonitrile - Glycol Esters of Methacrylic Acid. <u>S. M. Zhivukhin, M. V. Barkova and I. P. Losev</u> . . . . .	2517	2250

# TABLE OF CONTENTS (continued)

	Page	Russ. page
33. Sulfonation of 2-Chloronaphthalene, II, Sulfonation at Elevated Temperature, <u>N. N. Vorozhtsov Jr. and N. N. Karandasheva</u> . . . . .	2521	2255
34. Sulfonation of 2-Chloronaphthalene, III, Two-Step Sulfonation with Monohydrate and Oleum, <u>N. N. Vorozhtsov Jr. and N. N. Karandasheva</u> . . . . .	2525	2258
35. Hydrolysis of Aromatic Sulfonic Acid Esters, II, Influence of Substituents in the Benzene Ring on the Hydrolysis Rate of Ethyl Sulfonates and of Aromatic Sulfonyl Chlorides, <u>R. V. Visgert and E. K. Savchuk</u> . . . . .	2529	2261
36. Hydrolysis of Aromatic Sulfonic Acid Esters, III, Hydrolysis of Phenyl Esters of Substituted Benzenesulfonic Acids, <u>R. V. Visgert and E. K. Savchuk</u> . . . . .	2537	2268
37. Preparation of 1-(2'-Chloro-5'-Sulfo-phenyl)-3-Methyl-5-Pyrazolone from the Amide of Acetoacetic Acid, <u>P. A. Levin</u> . . . . .	2543	2274
38. Organocyclosiloxanes, II, Ethylchlorocyclosiloxanes, <u>N. N. Sokolov and S. M. Akimova</u> . . . . .	2545	2276
39. Hydrolytic Cleavage of Some Heterocyclic Sulfones, III, p-Nitrophenyl Sulfides and Sulfones of Benzazoles and 4-Phenylphthalazine, <u>N. P. Bednyagina and I. Ya. Postovsky</u> . . . . .	2549	2279
40. Chlorides and Esters of Arylcarbamidophosphoric Acids, <u>A. V. Kirsanov and E. S. Levchenko</u> . . . . .	2555	2285
41. Application of the Hofmann Reaction to High-Molecular Compounds, Containing Amide Groups, <u>N. D. Zakharov and S. A. Pavlov</u> . . . . .	2561	2290
42. Hydrogen Bond and Physical Properties of Nitroanilines, <u>A. E. Lutsky</u> . . . . .	2567	2295
43. The Association of Amines and Imines, <u>A. E. Lutsky</u> . . . . .	2571	2299
44. Reaction Mechanism for the Hydrolysis of Sucrose, <u>M. S. Zakharyevsky and K. M. Vasilenko</u> . . . . .	2577	2304
45. Electrolysis of o- and p-Methoxyphenylhydrazines, <u>M. Ya. Flosin, G. P. Girina and V. P. Mamaev</u> . . . . .	2585	2311
46. Studies of Compounds Labeled with $C^{15}$ and $N^{14}$ , V, Synthesis of $\alpha$ - $N^{15}$ -Amino Acids, <u>V. I. Maimin, K. M. Ermolaev and M. M. Sheinyakin</u> . . . . .	2587	2313
47. Reaction of Hydrazine Derivatives, VII, Cyclization of Aldazines Under the Influence of Anhydrous Formic Acid, <u>A. N. Kost and I. I. Grandberg</u> . . . . .	2593	2319
48. Study of Fatty Aromatic Amino Alcohols, II, Methods for the Preparation of $\alpha$ -(m-Hydroxyphenyl)- $\alpha$ -Methylaminomethanol, <u>S. I. Sergievskaya, A. A. Kropachova and L. E. Svetsitskaya</u> . . . . .	2597	2322
49. Synthesis of Threonine Peptides, I, <u>M. M. Botvinik, S. M. Avaeva and N. B. Noskova</u> . . . . .	2601	2325
50. Synthesis of N-Benzoyl-O-Peptides of Threonine and Allothreonine and of their Methylamides, II, <u>S. M. Avaeva and M. M. Botvinik</u> . . . . .	2605	2329
51. Spectroscopic Investigation of Factors Conditioning $\alpha$ -Elimination Reactions of $\alpha$ -Haloalkylsilanes, <u>M. I. Batuev, A. D. Petrov, V. A. Ponomarenko and A. D. Matveeva</u> . . . . .	2613	2336

# TABLE OF CONTENTS (continued)

	Page	Russ. page
52. Investigation of the Interaction of Chlorosulfonic Acid with Aromatic Compounds. III. Di- and Polysulfonation Reactions During Sulfonation of Acetanilide. <u>B. G. Yasnitsky</u> . . . . .	2623	2346
53. Tetraacyloxysilanes in Organic Syntheses. VI. Acyloxysilanes From Monobasic Organic Acids in the Synthesis of Ketones of the Indole and Pyrrole Series. <u>Yu. K. Yuryev and G. B. Elyakov</u> . . . . .	2627	2350
54. The Chemistry of Selenophene. III. Acyloxysilanes from Dicarboxylic Acids and their Monoethyl Esters in the Synthesis of Keto Acids of the Selenophene Series. <u>Yu. K. Yuryev, G. B. Elyakov and Z. V. Belyakova</u> . . . . .	2631	2353
55. Catalytic Transformations of Terpenes. VII. Preparation of Optically Pure $\alpha$ -Pinene from $\beta$ -Pinene. <u>G. A. Rudakov and M. M. Shestaeva</u> . . . . .	2635	2357
56. Physical Properties of Camphene. <u>G. A. Rudakov and M. M. Shestaeva</u> . . . . .	2641	2362
57. Discussion. Concerning Papers by A. I. Titov and F. L. Maklyaev. <u>E. A. Shilov</u> . . . . .	2645	2365



September, 1956

## TABLE OF CONTENTS

	Page	Russ. Page
1. The Chemistry of Compounds of Variable Composition. IV. The Tantalum-Selenium System. <u>S. M. Ariya, A. I. Zaslavsky and I. I. Matveeva</u> .....	2651	2373
2. The Lattice Energy of Salts with Polyatomic Ions. <u>K. B. Yatsimirsky</u> .....	2655	2376
3. Quantitative Aspects of the Auxochrome Effect of Elements (Cations). <u>I. S. Mustafin and E. A. Kashkovskaya</u> .....	2661	2381
4. The Determination of the True Specific Heat of Solid Materials at Low Temperatures. <u>M. M. Popov and V. P. Kolesov</u> .....	2665	2385
5. The Irreversible Reciprocal System of Chlorides and Iodides of Sodium and Lead. <u>I. I. Ilyasov and A. K. Bostandzhiyan</u> .....	2673	2393
6. Investigation of the Density and Viscosity of Binary Systems Formed by Urea with Acetic Acid and its Chloro Derivatives. <u>Yu. I. Bokhovkina</u> .....	2679	2399
7. A Physicochemical Investigation of the Water - Acetic Anhydride - Dioxane System. <u>K. N. Kovalenko, N. A. Trifonov and D. S. Tissen</u> .....	2685	2404
8. The Formation of Complexes by Stannic Chloride with Some Phenol Deri- vatives. <u>M. Usanovich and E. Pichugina</u> .....	2691	2410
9. The Viscosity and Density of the Stannic Chloride - Anisole System. <u>M. Usanovich and E. Pichugina</u> .....	2697	2415
10. Investigation of the First Stages of Catalytic Cracking of Paraffins on Aluminosilicate Catalysts by the Effect of Small Additives on the Process. <u>T. I. Andrianova and S. Z. Roginsky</u> .....	2701	2418
11. Investigation of the Chemical Structure of Divinyl Thermopolymers. <u>A. I. Yakubchik and I. I. Sorokina</u> .....	2705	2421
12. The Mechanism of Heterogeneous Catalytic Isomerization of Hydrocarbons on Acid Catalysts. III. The Mechanism of Racemization of Camphene on Titanic Acid. <u>G. A. Rudakov and M. M. Shestaeva</u> .....	2711	2426
13. Synthesis from 2, 4-Dichlorobutene-2 Syntheses of the Cyanamide Derivative and the Secondary Amine and its Derivatives. <u>A. L. Klebansky, V. V. Markin and K. K. Chevychalova</u> .....	2719	2433
14. Reactions of Methyl Methacrylate with Organomagnesium Compounds. II. The Action of Methylmagnesium and Ethylmagnesium Bromides on Methyl Metha- crylate. <u>A. I. Lebedeva, L. A. Gavrilova and T. B. Serdobintseva</u> .....	2723	2436
15. The Effect of Ultrasonics on Aqueous Solutions of Aromatic Hydrocarbons. <u>M. A. Khenokh and E. M. Lapinskaya</u> .....	2727	2439
16. Investigation of the Reactions of Acetaldehyde on Some Solid Catalysts. I. Conversion of Acetaldehyde and Mixtures of it with Water on S. V. Lebedev's Catalyst. <u>Yu. A. Gorin and G. A. Sergicheva</u> .....	2733	2444

## TABLE OF CONTENTS (continued)

	Page	Russ. Page
17. Investigation in the Field of Conjugated Systems. LXVII. Condensation of Propargylaldehyde with 2-Halogeno- and 2-Alkoxybutadienes. <u>A. A. Petrov and N. P. Sopov</u> . . . . .	2741	2452
18. Transformations of Pinacones Containing Substituted Acetylenic Radicals. XIII. The Action of Mercury Salts on Unsymm. Methyl-Diphenyl-Phenylethynyl-Ethylene Glycol and on Trimethylphenylethyl-Phenylethynyl-Ethylene Glycol. <u>E. D. Venus-Danilova and A. Fabritsy</u> . . . . .	2747	2458
19. Derivatives of Alkylphosphinous and Dialkylphosphinic Acids. IV. Addition and Isomerization Reactions of Esters of Alkylphosphinous Acids. <u>A. Razumov and O. Mukhacheva</u> . . . . .	2753	2463
20. Cyclic Esters of Ethylarsinous Acid. <u>Gilm Kamai and N. A. Chadaeva</u> . . . . .	2759	2468
21. The Reaction of Triphenylfluorosilane and of Triphenylchloromethane with Diphenylamine in Presence of Lithium. <u>V. S. Chugunov</u> . . . . .	2765	2474
22. The Role of Oxidation-Reduction Systems in the Process of Vulcanization with Sulfur. <u>E. I. Tinyakova, E. K. Khrennikova, B. A. Dolgoplosk, V. N. Reich and T. G. Zhuravleva</u> . . . . .	2767	2476
23. Reduction with Formic Acid and its Derivatives. VI. Synthesis of N-Cycloalkylethanolamines. <u>A. N. Kost and N. I. Stupnikova</u> . . . . .	2777	2485
24. The Structure of the Products of Alkali Treatment of Quaternary Salts of Benzimidazole Derivatives. <u>B. A. Porai-Koshits and Kh. L. Muravich</u> . . . . .	2779	2487
25. Investigations in the Imidazole Series. V. The Action of Phosphorus Oxychloride and of Acetic and Phosphoric Acids on 2- $\beta$ -Ketoalkyl (Aryl)-Mercaptoimidazoles. <u>P. M. Kochergin</u> . . . . .	2785	2493
26. Preparation of p-Hydroxyphenyl-Phenethyl Ketone and Some of its Ethers and Homologs. <u>V. A. Zasosov, E. I. Metalkova and S. N. Milovanova</u> . . . . .	2791	2499
27. Syntheses of Organosilicon Compounds. I. The Mechanism of the Reaction Between Methyl Chloride and Silicon in Presence of Copper. <u>A. L. Klebansky and V. S. Fikhtengolts</u> . . . . .	2795	2502
28. Absorption Spectra and Structure of Benzene Derivatives. XX. Spectrographic Investigation of p-Aminobenzenesulfonic Acid and its Derivatives. <u>N. A. Valyashko and N. P. Romazanovich</u> . . . . .	2801	2509
29. Absorption Spectra and Structure of Benzene Derivatives. XXI. p-Dimethylaminobenzenesulfonic Acid and its Methyl Ester. <u>N. A. Valyashko, F. F. Cheshko and N. P. Romazanovich</u> . . . . .	2809	2516
30. Synthesis of Some Halogen-Containing Amino- and Nitro Derivatives of Biphenyl. <u>L. M. Litvinenko, A. P. Grekov, N. N. Verkhovod and V. P. Dzyuba</u> . . . . .	2817	2524
31. Pentaphenylphosphorus. <u>G. A. Razuvaev and N. A. Osanova</u> . . . . .	2825	2531
32. Studies in the Field of Azomethine Dyes. I. On the Color of Certain Indamine Dyes Derived from $\alpha$ -Naphthol, Containing Substituents in the Naphthalene Nucleus. <u>B. S. Portnaya, N. S. Spasokukotsky, N. F. Turitsyna, T. P. Bobkova, G. I. Arbuzov and I. I. Levkoev</u> . . . . .	2831	2537
33. Studies in the Field of Azomethine Dyes. II. Indamine Dyes Derived from the Anilide of 1-Hydroxy-2-Naphthoic Acid. <u>N. F. Turitsina, B. S. Portnaya, N. S. Spasokukotsky, T. P. Bobkova, G. I. Arbuzov and I. I. Levkoev</u> . . . . .	2839	2546

# TABLE OF CONTENTS (continued)

	Page	Russ. Page
34. The Reaction Between Glycine and Phosphomolybdic Acid. <u>N. A. Tsvetkov and V. A. Konyshev</u> . . . . .	2847	2555
35. The Hydrolysis of the Polyanhydrides of Adipic and Sebacic Acids. <u>M. S. Dudkin and E. M. Goldstein</u> . . . . .	2851	2559
36. Changes in Phenolic Ethers During Catalytic Hydrogenation. <u>N. I. Shuikin, L. A. Ertvanskaya and V. V. Kontsova</u> . . . . .	2855	2562
37. Organic Insectofungicides. XXI. Synthesis of Mixed Esters of Dithiophosphoric Acid. <u>I. L. Vladimirova and N. N. Melnikov</u> . . . . .	2861	2569
38. Organic Insectofungicides. XXII. The Reaction of Dialkyl Chlorothiophosphates with p-Nitrophenols in the Presence of Pyridine Hydrochloride. <u>Z. M. Bakanova, Ya. A. Mandelbaum and N. N. Melnikov</u> . . . . .	2867	2575
39. Preparation of the Fluorescent Indicator 4-Ethoxyacridone. <u>G. N. Kosheleva</u> . . . . .	2869	2576
40. Organic Insectofungicides. XXIII. Preparation of Dialkyl Chlorothiophosphates. <u>N. N. Melnikov, Ya. A. Mandelbaum, V. I. Lomakina and Z. M. Bakanova</u> . . . . .	2871	2577
41. Organic Insectofungicides. XXIV. New Method for the Preparation of Halophenyl Esters of Sulfonic Acids. <u>L. G. Volfson, S. D. Volodkovich, N. N. Melnikov and I. M. Rubleva</u> . . . . .	2875	2579
42. Organic Insectofungicides. XXV. Synthesis of Mixed Esters of Thiophosphoric Acid. <u>Ya. A. Mandelbaum, N. N. Melnikov and V. I. Lomakina</u> . . . . .	2877	2581
43. On Heterocyclic Compounds Obtained from Hydrazides. I. 1,3,4-Triazole-5-Thiones. <u>I. Ya. Postovsky and N. N. Vereshchagina</u> . . . . .	2879	2583
44. On Heterocyclic Compounds Obtained from Hydrazides. II. 2,5-Substituted 1,3,4-Thiadiazoles. <u>N. N. Vereshchagina and I. Ya. Postovsky</u> . . . . .	2885	2588
45. Substituted Hydrazides of Hydroxycarboxylic Acids. I. Synthesis of Arylhydrazides of Diarylglycolic Acids. <u>I. S. Berdinsky and P. A. Petyunin</u> . . . . .	2889	2592
46. Synthesis of Aliphatic Amino Acids from Thiophene Derivatives. I. Synthesis of $\alpha$ -Amino Acids. <u>Ya. L. Goldfarb, B. P. Fabrichny and I. F. Shalavina</u> . . . . .	2893	2595
47. Catalytic Amination of Organic Compounds. IV. Amination of Butyl Alcohols. <u>N. S. Kozlov and N. I. Panova</u> . . . . .	2901	2602
48. Reaction of Hydrazine Derivatives. VIII. Cyclization of Aldazines Under the Influence of Alkyl Halides. <u>A. N. Kost, I. I. Grandberg and G. A. Golubeva</u> . . . . .	2905	2604
49. Study of the Sulfonation Reaction. XL. Quantitative Determination of Benzenedisulfonic Acids. <u>A. A. Spryskov and S. P. Starkov</u> . . . . .	2909	2607
50. Synthesis of Substituted Benzylamines and N-Benzyl- $\beta$ -Chloropropionamides. <u>N. K. Kochetkov and N. V. Dudykina</u> . . . . .	2915	2612
51. Anthraquinones. XXVI. The Hydrolysis of Anthraquinone-1,5-Disulfonic Acid. <u>V. V. Kozlov</u> . . . . .	2921	2617
52. Halogenation of Aromatic Silanes. III. Preparation and Properties of some Chloro- and Bromo-Derivatives of Benzyltrichlorosilane. <u>G. V. Motsarev and A. Ya. Yakubovich</u> . . . . .	2927	2622

## TABLE OF CONTENTS (continued)

	Page	Russ. Page
53. Esters on N-Phosphoric Acid, Trichloriminoacetic Acid and Esters of Trihydroxyphosphazotrichloroacetyl. <u>A. V. Kirsanov and G. I. Derkach</u> . . . . .	2935	2631
54. Preparation of 2-Nitromethylquinoline and its Derivatives. <u>L. Zalukaev and E. Vanag</u> . . . . .	2943	2639
55. Chlorides and Esters of Urethanphosphoric Acids. <u>A. V. Kirsanov and I. N. Zhmurova</u> . . . . .	2947	2642
56. Ultraviolet and Visible Absorption Spectra of Triphenylamine and its p-Nitro Derivatives in Concentrated Sulfuric Acid. II. <u>P. M. Bugai</u> . . . . .	2953	2648
57. Study of Plant Alkaloids ( <u>Leontice ewersmamil</u> BGE). IV. Structure of the Alkaloid Taspine. <u>T. F. Platonova, A. D. Kuzovkov and Yu. N. Sheinker</u> . . .	2957	2651
Discussion		
58. The Question of the Composition of the Copper Pyrophosphate Bath. <u>E. A. Ukshe and A. I. Levin</u> . . . . .	2963	2656
Errata to Issues 1-5, 1956 . . . . .	1	

October, 1956

## TABLE OF CONTENTS

	Page	Russ. Page
1. The Preparation of Sodium Phosphotungstates from Tungstic Acid and Sodium Phosphates. <u>E. A. Nikitina and E. V. Buris</u> .....	2967	2661
2. A Study of the Redox Properties of Germanium Heteropolyacids. <u>Z. F. Shakhova and R. K. Motorkina</u> .....	2969	2663
3. The Interaction of Some Lithium and Cadmium Salts in the Absence of Solvent. <u>D. S. Lesnykh, A. G. Bergman and N. G. Bukun</u> .....	2977	2673
4. Solubility in the Potassium Chloride-Urea-Water System at 25°. <u>A. K. Zhdanov and K. G. Nigai</u> .....	2983	2679
5. The Influence of Alkali Metal Cations in Complex Compounds of Aluminum Bromide on the Molecular Composition of These Complexes in Solvents of Low Dielectric Constant. <u>E. Ya. Gorenbein</u> .....	2985	2680
6. The Polarographic Behavior of Stypticin. I. <u>N. Ya. Khlopin and G. F. Reikhardt</u> ..	2991	2685
7. The Determination of Water in Complex Compounds Using the Fischer Reagent. <u>E. P. Zemlyakova</u> .....	2993	2687
8. The Fusibility, Viscosity and Density of the Systems $\text{SnBr}_4\text{-CH}_2\text{BrCOOH}$ and $\text{SbBr}_3\text{-CH}_2\text{BrCOOH}$ . <u>T. Sumarokova and N. Khakhlova</u> .....	2997	2690
9. The Viscosity of Binary Systems with Chloral. I. <u>V. V. Udovenko and R. I. Khomenko</u> .....	3001	2693
10. Spectra and Halochromism. I. Halochromism of Aromatic Carbinols. <u>V. F. Lavrushin</u> .....	3005	2697
11. Spectra and Halochromism. II. Halochromism of Tertiary Alicyclic and Aliphatic Alcohols. <u>V. F. Lavrushin and N. N. Verkhovod</u> .....	3013	2704
12. Catalytic Reactions with Metallic Aluminum. II. Alkylation of Benzene with Chlorocyclohexane and Chlorocyclopentane. <u>M. B. Turova-Polyak and I. R. Davydova</u> .....	3019	2710
13. Hydrogenation and Hydrogenolysis of $\alpha$ -Ethyl and $\alpha$ -Propenylfuran on Raney Nickel Catalyst. <u>N. I. Shulkin and I. F. Belsky</u> .....	3025	2716
14. 2-Furyltrichloromethylcarbinol and Its Complex Esters. <u>M. A. Zakutskaya</u> ....	3029	2720
15. The Oxonium Compounds of Complex Esters with Organic Acids. IV. The $\text{CH}_3\text{COOC}_2\text{H}_5\text{-CCl}_3\text{COOH}$ , $\text{CH}_3\text{COOC}_2\text{H}_5\text{-CCl}_3\text{COOH}$ and $\text{CCl}_3\text{COOC}_2\text{H}_5\text{-CCl}_3\text{COOH}$ Systems. <u>M. Usanovich, K. Bilyalov and L. Krasnomolova</u> .....	3033	2723
16. Bromination of Unsaturated Compounds. V. Bromine Addition Reactions of Allyltrimethylammonium Perchlorate. <u>N. P. Kanyaev</u> .....	3037	2726
17. Isomerization of Polymethylene Hydrocarbons by Aluminum Chloride. XIX. Isomerization of 1,3,5-n-Trimethylcyclohexane and Isopropylcyclohexane. <u>M. V. Turova-Polyak, Z. S. Kraits and E. G. Treshchova</u> .....	3043	2732

## TABLE OF CONTENTS (continued)

	Page	Russ. Page
18. The Reaction of Isovaleraldehyde with a Solution of Sodium Isoamylate in Isoamyl Alcohol. <u>V. I. Lyubomilov</u> .....	3049	2738
19. Investigations in the Field of Conjugated Systems. LXVIII. Diene Syntheses with Fluoroprene. I. Condensations of Fluoroprene with $\alpha, \beta$ -Unsaturated Aldehydes and Ketones. <u>A. A. Petrov and A. V. Tumanova</u> .....	3055	2744
20. Hydrolysis of Alkyldioxanes. <u>M. I. Farberov and N. K. Shemyakina</u> .....	3061	2749
21. The Alkylation of Benzene with Di-(1-Hydroxy)-Cyclohexylacetylene Monoacetate in the Presence of $AlCl_3$ . <u>R. M. Lagidze, N. K. Iremadze and L. P. Chigogidze</u> .....	3067	2754
22. A Contribution to the Synthesis of Tertiary Alcohols Based on Camphor. II. <u>I. Esafov and N. I. Novikov</u> .....	3071	2758
23. A Contribution to the Synthesis of Tertiary Alcohols Based on Camphor. III. <u>V. I. Esafov and N. I. Novikov</u> .....	3075	2762
24. The Synthesis of Complex Esters of Lignoceric Alcohol and Lignoceric Acid. <u>A. M. Khaletsky and N. M. Gorskaya</u> .....	3079	2765
25. Addition Reactions of $\alpha$ -Oxides of Piperylene. <u>A. N. Pudovik and B. E. Ivanov</u> ..	3083	2768
26. Oxidation of Divinyl, Isoprene and Piperylene with Acetyl Peroxide. <u>A. N. Pudovik and B. E. Ivanov</u> .....	3087	2771
27. Halogenation of Unsaturated Compounds with Aromatic Diazo Compounds. I. The Reaction of Phenyldiazonium Chloride and Bromide with Butadiene-1,3 and Some Reactions of 4-Chloro-1-Phenylbutene-2. <u>A. V. Dombrovsky and A. P. Terentyev</u> .....	3091	2776
28. Synthesis of Some Derivatives of p,p'-Diamino-Meso-3,4-Diphenylhexane. <u>S. F. Torf and N. V. Khromov-Borisov</u> .....	3099	2783
29. Attempted Synthesis of 7-Aminoheptanoic Acid by the Partial Hydrolysis of Pimelodinitrile with Hydrogen Peroxide. <u>M. N. Bogdanov</u> .....	3103	2786
30. Investigations in the Field of Acetylenic Amines. III. Isomerization of Dialkylaminoacetylenes. <u>A. T. Babayan and N. G. Vartanyan</u> .....	3107	2789
31. Synthetic Investigations in the Field of Polyene Compounds. X. The Direction and the Stereochemical Specificity of the Dehydration of Esters of 3,7-Dimethylocten-6-ol-3-ic-(1) Acid ( $\beta$ -Hydroxy- $\alpha, \beta$ -Dihydrogeranic) and 5,9-Dimethyldecadien-2,8-ol-5-ic-(1) Acid. <u>G. I. Samokhvalov, M. A. Miropolskaya and N. A. Preobrazhensky</u> .....	3111	2793
32. Heterocyclic Compounds. 39. Synthetic Anesthetics. IV. Esters of 1,2,5-Trimethyl-4-Phenyl-4-Piperidol with Aliphatic Acids. Synthesis of Promedol and Isopromedol. <u>I. N. Nazarov, N. S. Prostakov and N. I. Shvetsov</u> .....	3117	2798
33. Heterocyclic Compounds. 40. Synthetic Anesthetics. V. Esters of 1,2,5-Trimethyl-4-Phenyl-4-Piperidol with Aromatic Acids. <u>I. N. Nazarov, N. S. Prostakov, N. N. Mikhcheva and O. A. Shavrygina</u> .....	3131	2812
34. Heterocyclic Compounds. 41. Synthetic Anesthetics. VI. Esters of 1,2,5-Trimethyl-4-Aryl-4-Piperidols. <u>I. N. Nazarov, N. S. Prostakov, Zh. A. Krasnaya and N. N. Mikhcheva</u> .....	3139	2820

## TABLE OF CONTENTS (continued)

	Page	Russ. Page
35. Heterocyclic Compounds. 42. Synthetic Anesthetics. VII. Esters of Tertiary and Secondary 4-Piperidols. <u>I. N. Nazarov and N. S. Prostakov</u> . . . . .	3153	2834
36. Synthesis of 1-Benzoyl-4-( $\beta$ -Carbethoxy- $\beta$ -Formylethyl)-Piperidine Acetal. <u>L. H. Yakhontov and M. V. Rubtsov</u> . . . . .	3163	2844
37. Cyanoethylated Ketones in the Synthesis of Unsaturated $\delta$ -Lactones. VII. Isomeric Benzotetrahydrocoumarins. <u>N. P. Shusherina, R. Ya. Levina and V. I. Zdanovich</u> . . . . .	3167	2847
38. Barbituric Acids. V. Methylenemalononic Ester in Diene Synthesis. Spirobarbituric Acids. <u>R. Ya. Levina, Yu. S. Shabarov and L. A. Chervoneva</u> . . . . .	3173	2852
39. Investigations in the Field of Alkanesulfo Acids. XV. Chlorination of Anilides of Alkanesulfo Acids. <u>A. G. Kostsova, N. M. Yanova and Z. N. Sushko</u> . . . . .	3177	2855
40. The Reaction of Acylsulfanilyl Chloride with 2-Aminothiazole. II. Investigation of the Reaction of Carbomethoxysulfanilyl Chloride with 2-Aminothiazole. <u>B. G. Yasnitsky and E. B. Dolberg</u> . . . . .	3181	2859
41. Investigation of Sulfonation. XLI. Hydrolysis and Sulfonation of Benzenedisulfonic Acids. <u>A. A. Spryskov and S. P. Starkov</u> . . . . .	3185	2862
42. Sulfonic Acids of Sulfones as Side Products in Sulfonation Processes. III. Behavior of Diphenyl Sulfone and Its Sulfonic Acids Under the Action of Sulfuric Acid. <u>A. P. Shestov and N. A. Osipova</u> . . . . .	3189	2866
43. Sulfanyl Derivatives of Natural Amino Acids and Their Analogs. <u>Yuan Chen-e and M. N. Shchukina</u> . . . . .	3195	2872
44. Investigation of the Process of Polymerization of Styrene Under the Influence of Diazoamino Compounds and Activators. <u>P. A. Vinogradov</u> . . . . .	3205	2882
45. Steric Hindrance in Quaternary Salts of 2-Arylbenzothiazoles and 2-Arylbenzoselenazoles. <u>A. I. Kiprianov and V. A. Shrubovich</u> . . . . .	3215	2891
46. Synthesis of 4-Methyl-5-Acetyl-2-Aminothiazole and Some of Its Derivatives. <u>P. M. Kochergin</u> . . . . .	3223	2897
47. Synthesis of $\beta$ -(N-2-Chlorophenothiazyl)-Propionic Acid and Its Derivatives and Derivatives of $\beta$ -N-Phenothiazylpropionic Acid. <u>N. V. Savitskaya, Yu. S. Tsizin and M. N. Shchukina</u> . . . . .	3227	2900
48. Investigations in the Imidazole Series. VI. The Action of Bromoacetaldehyde and Its Derivatives on Some 2-Mercaptoimidazoles. <u>P. M. Kochergin and M. N. Shchukina</u> . . . . .	3233	2905
49. Investigations in the Imidazole Series. VII. The Action of Acetic Anhydride on 2- $\beta$ -Ketoalkyl (Aryl)-Mercaptoimidazoles. <u>P. M. Kochergin</u> . . . . .	3243	2916
50. Syntheses with the Help of Acrylonitrile. XXIX. The Cyanoethylation of Some Ketones. <u>A. P. Terentyev, A. N. Kost, Yu. V. Saltykova and V. V. Ershov</u> . . . . .	3251	2925
51. Investigations on Quinones. XII. The Reaction of p-Benzoquinone with Ethyl Acetoacetate. <u>A. N. Grinev, Pan Bon Khvar and A. P. Terentyev</u> . . . . .	3255	2928
52. Investigations on Quinones. XIII. Preparation of Endoethylenenaphthofurans. <u>A. N. Grinev, A. B. Terentyev and A. P. Terentyev</u> . . . . .	3259	2931



# TABLE OF CONTENTS (continued)

	Page	Russ. Page
53. Investigations on Quinones. XIV. The Reaction of p-Benzoquinone with p-Nitro- and p-Bromobenzoylactic Esters. <u>A. N. Grinev, N. K. Venevtseva and A. P. Terentyev</u> .....	3261	2933
54. The Synthesis of Homologs of Taurine by the Leuckart Reaction. <u>A. P. Terentyev, V. M. Potapov and I. Z. Semion</u> .....	3263	2934
55. Some Properties of Esters of p-Toluenesulfonic Acid with 17 $\beta$ -Hydroxysteroids. V. Study of the Products of Dehydration of 17 $\alpha$ -Methylandrostanediol-3 $\beta$ ,17 and Its Derivatives. <u>O. S. Madaeva</u> .....	3267	2937

November, 1956

## TABLE OF CONTENTS

	Page	Russ. Page
1. The Preparation of Sodium Phosphomolybdates from Molybdic Anhydride and Sodium Phosphates. <u>E. A. Nikitina and E. V. Burls</u> .....	3273	2945
2. Study of the Melts of Potassium and Silver Nitrates by the Method of Electromotive Forces. <u>M. S. Zakharyevsky and T. V. Permyakova</u> .....	3275	2947
3. Surface Tension of Binary Systems Composed of Acetic Acid and Its Chloro Derivatives. <u>I. M. Bokhovkin</u> .....	3281	2953
4. Physicochemical Analysis of Binary Systems Formed by Acetamide with Organic Acids. IV. Surface Tension of Binary Systems Formed by Acetamide with Acetic Acid and Its Chloro Derivatives. <u>Yu. I. Bokhovkina</u> .....	3285	2955
5. The Viscosity of Binary Systems with Chloral. II. <u>V. V. Udovenko and R. I. Khomenko</u> .....	3291	2959
6. Physicochemical Study of the Reaction of Titanium Tetrachloride with the Esters of Monobasic Acids. VIII. Reaction of Titanium Tetrachloride with n-Butyl Formate and Isoamyl Formate. <u>Yu. A. Lysenko</u> .....	3297	2963
7. On the Periodic Relationship of Electrode Potentials of Metals in Fused Salts. <u>Yu. K. Dellimarsky</u> .....	3303	2968
8. Reaction of Free Radicals in Solutions. VI. Mechanism of the Decomposition of Aliphatic Aromatic Triazenes in the Presence of Water and Acids. <u>V. Ya. Andakushkin, B. A. Dolgoplosk and I. I. Radchenko</u> .....	3307	2972
9. Oxidation-Reduction Systems for the Initiation of Radical Processes. III. Utilization of the Reaction for the Reduction of Metal Oxide Salts with Hydrocarbons for Initiation of the Polymerization Process. <u>B. A. Dolgoplosk and E. N. Kropacheva</u> .....	3315	2980
10. Synthesis of Ethyl Alcohol, Containing the Heavy Oxygen Isotope. <u>R. V. Kudryavtsev and D. N. Kursanov</u> .....	3319	2984
11. Study of the Mechanism of Hydrolysis by Means of the Heavy Oxygen Isotope. II. Hydrolysis of Dimethyl Sulfate in Acid and Alkaline Medium. <u>D. N. Kursanov and R. V. Kudryavtsev</u> .....	3323	2987
12. Low Temperature Oxidation of Methane Hydrocarbons. <u>B. G. Gavrillov and G. V. Zinovyeva</u> .....	3327	2989
13. Conjugated Systems. LXIX. Diene Synthesis with Fluoroprene. II. Condensation of Fluoroprene with Derivatives of $\alpha, \beta$ -Unsaturated Monobasic Acids. <u>A. A. Petrov and A. V. Tumanova</u> .....	3329	2991
14. Conjugated Systems. LXX. Diene Syntheses with Fluoroprene. III. Condensation of Fluoroprene with the Esters of $\alpha, \beta$ -Unsaturated Dibasic Acids. <u>A. A. Petrov and A. V. Tumanova</u> .....	3335	2995
15. Reaction of Cyclopropane Hydrocarbons with Mercuric Salts. V. Action of Mercuric Acetate on Methylcyclopropane and 1,1-Dimethylcyclopropane. <u>R. Ya. Levina, V. N. Kostin and V. A. Tartakovsky</u> .....	3339	2998

# TABLE OF CONTENTS (continued)

	Page	Run, Page
16. Chemistry of Cuprammonium Solutions of Cellulose. VII. The Reaction of Polyhydroxy Compounds with the Ammine Complex of Copper. <u>S. N. Danilov and M. G. Okun</u> . . . . .	3347	3005
17. Role of Phosphoric Acid in the Study and Treatment of Cellulose. I. The Swelling and Solution of Cellulose in Phosphoric Acid. <u>S. N. Danilov and N. F. Gintse</u> . . . . .	3357	3014
18. Study of the Reaction for the Exchange of Alkoxy Groups by the Radicals of Organomagnesium Compounds. A New Method for the Preparation of Mixed Acetals of Formaldehyde with the $\beta$ -Phenylethyl Alcohol Residue. <u>M. R. Kulibekov and Shamkhal Mamedov</u> . . . . .	3363	3020
19. Glycol Ethers. XXVII. Synthesis of the $\beta$ -Alkoxy Derivatives of Methylene Glycol Ethers. <u>Shamkhal Mamedov and G. Mamedov</u> . . . . .	3367	3023
20. The Synthesis of Nonsteroid Androgens. <u>A. M. Khaletsky and B. A. Zaputryaev</u> . . . . .	3371	3026
21. The Synthesis of Organophosphorus Compounds from Hydrocarbons and Their Derivatives. VI. The Oxidative Chlorophosphination of Cyclohexane and Propylene Using Phenylchlorophosphine. <u>Yu. M. Zinoviyev and L. Z. Soborovsky</u> . . . . .	3375	3030
22. The Synthesis of Halogen Derivatives of Phenazine. IV. Bromophenazines. <u>V. P. Chernetsky and A. I. Kiprianov</u> . . . . .	3377	3032
23. Studies in the Field of Azomethine Dyes. III. Azomethine Dyes from 3-Alkyl-1-(Carboxy and Dicarboxybenzthiazolyl-2')-Pyrazolones-5. <u>I. A. Solovyeva, M. V. Krashenninnikova and G. I. Arbuzov</u> . . . . .	3383	3036
24. The Analysis of the Influence of Structure on Spectra. I. A Comparative Study of Color in Azomethines of Type $O_2NC_6H_4CH=NC_6H_4A$ and $AC_6H_4CH=NC_6H_4O_2$ . Reflection and Absorption Spectra. <u>V. A. Izmailsky and E. A. Smirnov</u> . . . . .	3389	3042
25. The Preparation of Chlorides and Esters of Arylphosphoric Acids. Catalytic Phenomena in the Reaction of Phenols with Phosphorus Oxychloride. <u>V. V. Katyshkina and M. Ya. Kraft</u> . . . . .	3407	3060
26. The Enzymatic Hydrolysis of N-Benzoyl-O-Peptides of Serine and Threonine. <u>S. M. Avayeva and M. M. Botvinik</u> . . . . .	3413	3066
27. Tetra-Tert.-Butoxysilane. <u>M. G. Voronkov, A. N. Lazarev and A. K. Baigozhin</u> . . . . .	3421	3072
28. Spectra and Halochromism. III. The Reaction of p-Fuchsin, Aniline Blue and Their Carbinols with Acids. <u>V. F. Lavrushin and T. M. Shmaeva</u> . . . . .	3425	3075
29. $\beta$ -Aminovinyl Ketones. VI. Tautomerism of Alkyl $\beta$ -Aminovinyl Ketones. <u>N. K. Kochetkov and Yanush Dombrovsky</u> . . . . .	3431	3081
30. The Preparation of Furyl- and Arylpyruvic Acids by Hydrolysis of 5-Arylidene-2-thio-oxazolidones-4. <u>T. E. Gorizdra and S. N. Baranov</u> . . . . .	3443	3092
31. The Effect of Acids and Alkalis on Absorption Spectra of Pyridine Dyes. <u>N. E. Grigoryeva, I. K. Gintse and A. P. Severina</u> . . . . .	3447	3096
32. Synthetic Investigations on Polyenoid Compounds. XI. The Structure of 2-Methyl-4-(2',6',6'-trimethylcyclohexen-1'-yl)-buten-2-al-1. <u>G. I. Samokhvalov, L. P. Zhukova and N. A. Preobrazhensky</u> . . . . .	3457	3105

## TABLE OF CONTENTS (continued)

	Page	Russ. Page
33. A New Method of Preparation of Esters of Phosphinic and Thiophosphinic Acids. XXVI. Addition of Incomplete Esters of Acids of Phosphorus to Ethyl Isocyanate, Vinylacetate and Esters of Unsaturated Carboxylic Acids. <u>A. N. Pudovik, I. V. Konovalova and R. E. Krivosova</u> . . . . .	3463	3110
34. Synthesis of $\omega$ -Nitroethyl-p-Nitrobenzene. <u>L. Zalukayev and E. Vanag</u> . . . . .	3469	3115
35. Hydrogenation of 4-( $\beta,\beta$ -Dicarbethoxyvinyl)-pyridine in the Presence of Raney Nickel Catalyst. <u>E. S. Nikitskaya and M. V. Rubtsov</u> . . . . .	3475	3119
36. Chloromethylation of Anthracene. <u>E. Yu. Gudrinetskaya and G. Ya. Vanag</u> . . . . .	3479	3123
37. Addition of Indandione-1,3 and of Its Nitro-Derivative to a Double Bond. <u>L. Zalukayev</u> . . . . .	3483	3125
38. Reactions of Hydrazine Derivatives. IX. Interaction of Phenylhydrazine with $\beta$ -Substituted Propionitriles. <u>A. N. Kost and V. V. Ershov</u> . . . . .	3491	3132
39. Reactions of Hydrazine Derivatives. X. Absorption Spectra of Azines and Pyrazolines. <u>N. B. Kupletskaya, A. N. Kost and I. I. Grandberg</u> . . . . .	3495	3135
40. Halogen Derivatives of Nitrodimedone. <u>O. Ya. Neiland, E. Yu. Gudrinetskaya and G. Ya. Vanag</u> . . . . .	3499	3139
41. Indole Derivatives. I. The Synthesis of N-Benzyl-1,2,3,4-tetrahydrocarbazoles. <u>N. K. Kochetkov, N. F. Kucherovala and V. P. Evdakov</u> . . . . .	3505	3144
42. Indole Derivatives. II. The Synthesis of Some Derivatives of 1,2,3,4-Tetrahydro- $\gamma$ -carboline. <u>N. F. Kucherovala and N. K. Kochetkov</u> . . . . .	3511	3149
43. The Chemistry of Selenophen. IV. The Iodination and Metallation of Selenophen and Its Homologs. Selenophen Carboxylic Acids. <u>Yu. K. Yuryev and N. K. Sadovaya</u> . . . . .	3517	3154
44. Heterocyclic Compounds. 43. Synthetic Pain-Relieving Substances. VIII. 1-Alkyl-2,5-dimethyl-4-phenyl-4-piperidinols. <u>I. N. Nazarov, N. I. Shvetsov and O. I. Sorokin</u> . . . . .	3521	3157
45. Heterocyclic Compounds. 44. Synthetic Pain-Relieving Substances. IX. Esters of 1-Alkyl-2,5-dimethyl-4-phenyl-4-piperidinols. Homologs of Promedol and Isopromedol. <u>I. N. Nazarov and N. I. Shvetsov</u> . . . . .	3533	3170
46. Heterocyclic Compounds. 45. Cyanhydrins of $\gamma$ -Piperidones, Tetrahydro- $\gamma$ -pyrones and Tetrahydro- $\gamma$ -thiopyrones. Stereochemistry of the Cyanhydrin Synthesis. <u>I. N. Nazarov and B. V. Unkovsky</u> . . . . .	3545	3181
47. Studies in the Field of Heterocyclic Chemistry. XXVI. New Methods for Preparing 9-Phenylacridine. <u>P. A. Petyunin and N. G. Panferova</u> . . . . .	3555	3191
48. Tetraacyloxysilanes in Organic Synthesis. VII. Silicoanhydrides of Unsaturated Monobasic Organic Acids in the Synthesis of Unsaturated Ketones of the Benzene, Thiophen and Selenophen Series. <u>Yu. K. Yuryev, G. B. Elyakov and I. M. Milshtein</u> . . . . .	3559	3194
49. Some Properties of p-Toluenesulfonates of 17 $\beta$ -Hydroxysteroids. VI. The Synthesis of the Acetate of 17,17-Dimethyl-18-nor- $\Delta^{5,12}$ -Androstadienol-3. <u>O. S. Madaeva</u> . . . . .	3565	3198

# TABLE OF CONTENTS (continued)

	Page	Russ. Page
50. Some Properties of p-Toluenesulfonates of 17 $\beta$ -Hydroxysteroids. VII. Infrared Spectra of Some Derivatives of the Androstane and 18- Norandrostane Series. <u>O. S. Madaeva and Yu. N. Sheinker</u> . . . . .	3569	3201
51. Electrolytic Dissociation Constants of Some Saccharodicarboxylic Acids and Their Monolactones. <u>L. A. Mai</u> . . . . .	3575	3206
52. Inner Complexes of Azocompounds. IV. The Reaction of Copper Salts with Certain o-Hydroxy- and o-Amino-o'-Methylthioazocompounds. <u>V. I. Mur</u> . . . . .	3577	3208
53. The Reaction of Tetraphenyltin with Organic Acids. <u>M. M. Koton</u> . . . . .	3581	3212
54. The Halogenoarylation of Unsaturated Compounds with Aromatic Diazo- compounds. II. Acrylonitrile in Halogenoarylation. <u>A. V. Dombrovsky, A. P. Terentyev and A. M. Yurkevich</u> . . . . .	3585	3214
55. Speciosine - A New Alkaloid from Colchicum Speciosum Stev. <u>V. V. Kiselev</u> . . . . .	3591	3218
56. The Study of Plant Alkaloids of the <u>Elaeagnaceae</u> Family. The Isolation of Tetrahydroharmol and N-Methyltetrahydroharmol from the Bark of <u>Elaeag- nus Angustifolia</u> L. <u>T. F. Platonova, A. D. Kuzovkov and P. S. Massagetov</u> . . . . .	3593	3220
57. In Memoriam A. A. Streplikheev. . . . .	3597	3223
58. Errata . . . . .	1	

December, 1956

## TABLE OF CONTENTS

	Page	Russ. Page
1. The Oxidation Potential of Bichromate. <u>B. V. Ptitsyn and V. F. Petrov</u> .....	3601	3233
2. Study of Metastable Equilibria Between Liquid Phases. VI. <u>I. L. Krupatkin</u> .....	3609	3240
3. Fusion Diagrams of Systems Containing Hexachloroethane. III. <u>T. Sumarokova and L. Shefer</u> .....	3615	3247
4. Physicochemical Analysis of the Ternary System Urea-Acetic Acid-Monochloroacetic Acid. <u>I. M. Bokhovkin and Yu. I. Bokhovkina</u> .....	3623	3255
5. The Use of Refractometry for Studying Complex Formation in Solutions of Electrolytes. I. System $\text{CdCl}_2\text{-KCl-H}_2\text{O}$ . <u>B. V. Ioffe</u> .....	3627	3259
6. The Viscosity, Density and Bond Energy of Mixed Binary Systems, The Components of Which Possess Geometrically Similar Molecules. <u>A. P. Toropov</u> .....	3635	3267
7. Viscosity of Binary Systems With Chloral. III. <u>V. V. Udovenko and R. I. Khomenko</u> .....	3639	3270
8. Physicochemical Study of the Reaction of Titanium Tetrachloride with the Esters of Monobasic Acids. IX. The Reaction of Titanium Tetrachloride with n-Butyl Chloroacetate and With Some Esters of Trichloroacetic Acid. <u>Yu. A. Lysenko</u> .....	3643	3273
9. Method for the Determination of the Activity of Skeletal Nickel Catalyst With the Aid of the Cementation Reaction. <u>A. I. Kryagova</u> .....	3649	3280
10. The Reaction of Nitrous Acid with Salicylic Acid in Acetic Acid Medium. <u>A. A. Nemodruk</u> .....	3653	3283
11. Syntheses With Complex Compounds. III. The Preparation of Azo Compounds from Chromotropic Acid and Other 1,8-Dihydroxynaphthalene Sulfonic Acids. <u>V. I. Kuznetsov and A. A. Nemodruk</u> .....	3657	3285
12. Complexes of Stannic Chloride and Bromide With Thiourea. <u>T. Sumarokova and E. Yarmukhamedova</u> .....	3663	3291
13. Complexes of Stannic Chloride and Bromide With Glycine. <u>T. Sumarokova and E. Yarmukhamedova</u> .....	3667	3295
14. Contact Transformations of Dicycloheptyl in the Presence of Platinized Carbon. <u>S. I. Khromov, I. M. Kuznetsova and E. S. Balenkova</u> .....	3673	3302
15. Reaction of Metal Oxides with Alcohols. IV. Vanadium Oxides-Isopropyl Alcohol. <u>V. A. Komarov and N. P. Timofeeva</u> .....	3679	3306
16. The Reaction of Silicon Tetrafluoride with Benzylmagnesium Chloride. <u>G. V. Medoks and E. M. Soshestvenskaya</u> .....	3683	3310
17. Catalytic Synthesis of Ketones. VI. Synthesis of Methyl Butyl and Ethyl Phenyl Ketones. <u>I. P. Yakovlev and M. M. Kreimer</u> .....	3685	3312
18. Conjugated Systems. LXXI. Dimerization of Fluoroprene. <u>A. A. Petrov and A. V. Tumanova</u> .....	3687	3314
19. The Order of Addition of Bromine, Hydrogen Bromide and Alkyl Hypobromites to Allylmethylacetylene (Hexene-1-yne-4). <u>A. A. Petrov</u> .....	3693	3319



## TABLE OF CONTENTS (continued)

	Page	Russ. Page
20. The Synthesis of 2,2,3,5,6,8,9,9-Octamethyldecadiene-3,7, 3,5,6,6-Tetramethyl-2-carboxy-4-heptenic Acid-1 and 3,5,6,6-Tetramethyl-4-heptenic Acid-1. <u>A. D. Petrov, V. N. Gramentskaya and M. P. Shebanova</u> .....	3699	3324
21. The Synthesis of Branched Acetylenic Hydrocarbons. The Preparation of 2,6,6-Trimethyl-3,3-diisopropylheptyne-4. <u>A. I. Zakharova and G. M. Murashov</u> .....	3703	3328
22. The Reaction of Hydrogen Selenide with $\alpha$ -Oxides of the Acetylene and Vinylacetylene Series. The Synthesis of Alkyl-, Hydroxyalkyl- and Vinylselenophen. <u>F. Ya. Perveev, N. I. Kudryashova and V. N. Glebovsky</u> .....	3707	3331
23. The Addition of Polyhalogensilanes and Alkylhydrosilanes to Compounds Containing a Triple Bond. <u>L. L. Shchukovskaya, A. D. Petrov and Yu. P. Egorov</u> .....	3713	3338
24. Tetraacyloxysilanes in Organic Synthesis. VIII. Silicoanhydrides of Saturated Monobasic Organic Acids in the Synthesis of Ketones of the Thiophen Series. <u>Yu. K. Yuryev, G. B. Elyakov, N. S. Zefirov and A. N. Vysokosov</u> .....	3717	3341
25. Studies on the Synthesis and Reactions of Organosilicon Compounds Containing Oxygen. The Synthesis of Dialkyl-, Alkylaryl- and Diarylsilane diols and Certain Of Their Properties. <u>M. F. Shostakovskiy, D. A. Kochkin, Kh. I. Kondratyev and V. M. Rogov</u> ....	3721	3344
26. The Reaction of Vinyl Ethers With Compounds Containing Mobile Hydrogen. I. The Reaction of Vinyl Butyl Ether with Esters of Malonic Acid. <u>Z. I. Torgashina and A. L. Naumchuk</u> .....	3731	3353
27. Reactions of Certain $\beta,\beta$ -Dihaloalkyl Substituted Propionaldehydes. <u>T. V. Protopopova and A. P. Skoldinov</u> .....	3733	3355
28. Studies in the Field of Thiosulfonic Acids. I. The Synthesis and Antibacterial Properties of Certain Alkyl Esters of Propane-1-Thiosulfonic Acid and Butane-1-Thiosulfonic Acid. <u>B. G. Boldyrev, A. K. Litkovets and T. A. Trofimova</u> .....	3739	3360
29. Bisulfite Compounds of 4-Nitroso-1-Naphthol and 1-Naphthol. <u>S. V. Bogdanov and N. N. Karandasheva</u> .....	3745	3365
30. A Study of the Comparative Reactivity of the Hydroxyl Groups in Cellulose. II. The Distribution of Methoxy Groups in Partly Methylated Cellulose Prepared in a Medium of Bases. <u>V. Derevitskaya, Yu. Kozlova and Z. Rogovin</u> .....	3749	3369
31. A Study of the Comparative Reactivity of the Hydroxyl Groups in Cellulose. III. The Distribution of Methoxy Groups in Partly Methylated Cellulose Obtained by the Methylation of Cellulose with Diazomethane. <u>V. Derevitskaya, Yu. Kozlova and Z. Rogovin</u> .....	3755	3374
32. The Reaction of Alkyl Hypochlorites with Phosphites. <u>K. A. Petrov and G. A. Sokolsky</u> ...	3759	3377
33. The Reaction of n-Chloramines with Phosphites. <u>K. A. Petrov and G. A. Sokolsky</u> .....	3761	3378
34. The Reactions of Sulfenyl Chlorides with Phosphites. <u>K. A. Petrov, G. A. Sokolsky and B. M. Polees</u> .....	3765	3381
35. Synthesis in the Phenothiazine Series. I. The Synthesis of Dialkylaminoacyl-2-chlorophenothiazines. <u>S. V. Zhuravlev and A. N. Gritsenko</u> .....	3769	3385
36. The Direct Amination of Benzothiazole Derivatives. <u>R. P. Veltman</u> .....	3773	3388
37. Spatial Structure and Reactivity. V. Inhibited Internal Rotation and the Kinetics of the Acylation of 2,2'-Halogen Derivatives of 4-Aminodiphenyl and 4-Amino-4'-nitrodiphenyl. <u>L. M. Litvinenko and A. P. Grekov</u> .....	3777	3391



## TABLE OF CONTENTS (continued)

	Page	Russ. Page
38. A New Way of Introducing a Dihydroxyacetone Side-Chain. <u>L. V. Sokolova, G. A. Frangulyan and N. N. Suvorov</u> .....	3785	3399
39. Free Radical Reactions in Solutions. VII. Role of Activators in the Decomposition Processes in Triazenes and in Initiation of Polymerization. <u>V. Ya. Andakuskin, B. A. Dolgoplosk and I. I. Radchenko</u> .....	3789	3403
40. Synthesis and Transformation of Some Derivatives of Di-2-thienylmethane. III. Bromine-Substituted Di-2-thienylmethanes. <u>Ya. L. Goldfarb and M. L. Kirmalova</u> .....	3797	3409
41. Some Esters of Dibutylarsinic Acid. <u>K. I. Kuzmin</u> .....	3803	3415
42. Studies in the Pyrimidinolimidazolone Field. III. Preparation of Pyrimidinolimidazolone Salts, and Alkylation of Pyrimidinolimidazolones. <u>Yu. P. Shvachkin and M. A. Prokofyev</u> ..	3805	3416
43. Thiazolidine-4-carboxylic Acid and Its Derivatives. VI. Study of the Products from Condensing $\alpha$ -Amino- $\beta$ -mercapto Acids with 4-Aminomethylene-2-phenyl-5-oxazolone. <u>I. T. Strukov</u> .....	3811	3422
44. Preparation of Asymmetric Phosphonium Compounds With Different Aliphatic Radicals. <u>Gilm Kamai and L. A. Khismatullina</u> .....	3815	3426
45. Derivatives of Bicyclo(2,2,1) Heptane. 1. Condensation of 2-Acyl-3-chlorobicyclo(2,2,1) Heptanes With Malonic Ester and Related Compounds. <u>N. K. Kochetkov and A. Ya. Khorlin</u> .....	3819	3430
46. The Interaction of Copper Tetraphenyl Boron with Carbonyl Compounds. <u>V. A. Sazonova and I. I. Nazarova</u> .....	3829	3440
47. The Synthesis of $\beta$ -Chloroalkylamino Derivatives of Thiazole. <u>B. M. Mikhailov, V. P. Bronovitskaya and I. K. Platova</u> .....	3835	3445
48. Reactions of Hydrazine Derivatives. XI. Synthesis of Some Cyclopropane Hydrocarbons. <u>I. I. Grandberg, A. N. Kost and A. P. Terentyev</u> .....	3839	3450
49. Interaction Products of $\beta$ -Picoline and 2,4-Dinitrochlorobenzene. <u>N. E. Grigoryeva, I. K. Gintse and N. G. Karpyuk</u> .....	3845	3455
50. Alkylated Diamidines of the Stilbene Type. <u>I. M. Lipovich and S. I. Sergievskaya</u> .....	3851	3462
51. The Synthesis of Halogenated Derivatives of Phenazine. V. Iodophenazines. <u>V. P. Chernetsky and A. I. Kiprianov</u> .....	3855	3465
52. Synthesis of Derivatives of 1,2,3-Thiadiazolines. <u>A. P. Terentyev and M. N. Preobrazhenskaya</u> .....	3859	3468
53. Alkaline Esters of $\alpha,\beta$ -Diphenylpropionic Acid. II. Derivatives of $\beta$ -(4-Methoxyphenyl)- $\alpha$ -phenylpropionic Acid. <u>V. M. Fedosova and O. Yu. Magidson</u> .....	3867	3475
54. The Problem of the Preparation of $\alpha$ -Alkyl-naphthalenes. <u>S. I. Sergievskaya and T. S. Safonova</u> .....	3871	3479
55. Heterocyclic Compounds. 46. Hydrolysis and Alcoholysis of Cyanohydrins of $\gamma$ -Piperidones, Tetrahydro- $\gamma$ -pyrones and Tetrahydro- $\gamma$ -thiopyrones. Synthesis of 1-Alkyl-2,5-dimethyl-4-carbalkoxy-4-piperidols. <u>I. N. Nazarov and B. V. Unkovsky</u> .....	3877	3486
56. Heterocyclic Compounds. 47. Synthetic Anesthetic Substances. X. Esters of 1,2,5-Tri-methyl-4-carbalkoxy-4-piperidols. New Synthetic Analogs of $\alpha$ -Cocaine and $\alpha$ -Eucaine. <u>I. N. Nazarov, B. V. Unkovsky and Yu. B. Volkenshtein</u> .....	3891	3500
57. Heterocyclic Compounds. 48. 1-Carbalkoxyalkyl-2,5-dimethyl-4-piperidones. <u>I. N. Nazarov, T. V. Sheremeteva and R. I. Kruglikova</u> .....	3899	3510
58. From the Committee on Chemical Thermodynamics at the Division of Chemical Science of the Academy of Sciences of the USSR. Information for Scientists Doing Research in the Field of Experimental Thermochemistry. ....	3905	Back cover

